



GRAS Notice (GRN) No. 499

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ORIGINAL SUBMISSION

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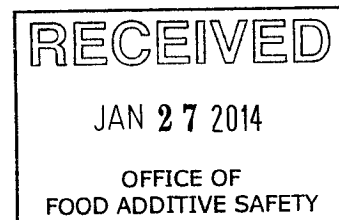
Magceutics, Inc. 3159 corporate Place, Hayward, CA94545



January 24, 2014

Paulette Gaynor, Ph.D.
Office of Food Additive Safety (HFS-200)
Center for Food Safety and Applied Nutrition
Food And Drug Administration
5100 Paint Branch Parkway
College Park, MD 20740-3835

GRN 000499



Dear Dr. Gaynor:

In accordance with 21 CFR 170.36 (62 FR 18960; April 17, 1997), Magceutics, Inc. is hereby submitting notice of a determination based on scientific procedures that the use of magnesium L-threonate hydrate, as defined in the enclosed documents, is generally recognized as safe (GRAS) under specific conditions of use as an ingredient in multiple food categories, and that it is therefore exempt from the premarket approval requirement of the Federal Food, Drug, and Cosmetic Act.

Attached please find three (3) copies of the GRAS notice, each of which includes a comprehensive summary of data supporting the safety of the ingredient and the signed statement of an expert panel regarding the value of these data in supporting a GRAS determination.

My contact information is provided below. Please feel free to contact me¹ by phone or e-mail if you have any questions regarding this GRAS notice.

Sincerely,

(b) (6)

Guosong Liu
President
Phone: 510-606-0084
guosong@magceutics.com

¹ Please note that Magceutics, Inc. has authorized Dr. David Bechtel (David.Becht@Intertek.com) from Intertek Cantox, located at 1011 U.S. Highway 22, Suite 200, Bridgewater, NJ 08827, to engage in discussions about any issues related to the enclosed GRAS notice. Dr. Bechtel may be reached by e-mail (shown above), by telephone at (908) 429-9202, or by FAX at (908) 429-9260.

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Magceutics, Inc. 3159 corporate Place, Hayward, CA94545



GRAS NOTICE

**SUMMARY OF DATA SUPPORTING A DETERMINATION THAT THE
USE OF MAGNESIUM L-THREONATE HYDRATE IN FOODS IS
GENERALLY RECOGNIZED AS SAFE (GRAS)**

Submitted to:

Food and Drug Administration
Center for Food Safety and Applied Nutrition
Office of Food Additive Safety

By:

Magceutics, Inc.
3159 Corporate Place
Hayward, California 94545

January 24, 2014

GRAS Exemption Claim

Magceutics, Inc. has determined that the use of magnesium L-threonate hydrate under specific conditions of use as an ingredient in multiple food categories entails a reasonable certainty of no harm and is generally recognized as safe (GRAS) based on scientific procedures. Consequently, it is exempt from the premarket approval requirement of the Federal Food, Drug, and Cosmetic Act.

Signature  Date 1/24/2014
Guosong Liu
President

Name and Address of Notifier

Magceutics, Inc.
3159 Corporate Place
Hayward, California 94545

Contact Name: Guosong Liu
Phone: 510-606-0084
Fax: 510-265-1352
E-mail: Guosong@magceutics.com

GRAS Substance

The subject of this GRAS notice is magnesium L-threonate hydrate marketed by Magceutics, Inc. under the name Magtein™. The product is manufactured under current good manufacturing practices (cGMP) (21 CFR, part 110). Prior to leaving the facility analyses such as elemental analysis (titration, ICP), heavy metals analysis (ICP-MS), solubility, assay (titration), and identity testing (FTNIR), are conducted to ensure that each lot meets established specifications (e.g., for assay 98-102%, magnesium content of 7.2 to 8.3%, heavy metals, and microbiological activity).

Intended Use and Projected Consumer Exposure

Magceutics intends to use Magtein™ in foods for the general population at levels resulting in an estimated 90th percentile all user intake of 40 mg/kg body weight (bw)/day of magnesium L-threonate hydrate providing 3.0 mg/kg bw/day magnesium. Magtein™ would be used as a substance offering nutritive value as a source of dietary magnesium.

Basis for GRAS Determination

To make the GRAS determination, Magceutics compiled information about the substance, specifications, manufacturing, proposed uses, and evidence of safety into a comprehensive dossier (GRAS Dossier); and sought the opinion of qualified experts (*i.e.*, expert panel) in determining whether there is consensus among their peers that the use of these substances as described entails a reasonable certainty of no harm and is generally recognized as safe based on the available scientific evidence.

All data and information that are the basis for this GRAS determination are available for FDA's review and copying at reasonable times at Magceutics, Inc., 3159 Corporate Place, Hayward, California 94545, and will be sent to FDA upon request.

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Magceutics, Inc. 3159 corporate Place, Hayward, CA94545



GRAS DOSSIER GRN 000499

SUMMARY OF DATA SUPPORTING A DETERMINATION THAT THE USE OF MAGNESIUM L-THREONATE HYDRATE IN FOODS IS GENERALLY RECOGNIZED AS SAFE (GRAS)

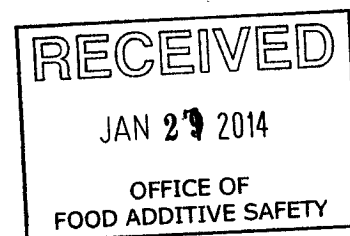
Submitted to:

Food and Drug Administration
Center for Food Safety and Applied Nutrition
Office of Food Additive Safety

By:

Magceutics, Inc.
3159 Corporate Place
Hayward, California 94545

January 24, 2014



SUMMARY OF THE DATA SUPPORTING A DETERMINATION THAT THE USE OF MAGNESIUM L-THREONATE HYDRATE IN FOODS IS GENERALLY RECOGNIZED AS SAFE (GRAS)

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List of Abbreviations

EFSA	European Food Safety Authority
FTNIR	Fourier transform near-infrared
GC-MS	gas chromatography–mass spectrometry
ICP-MS	inductively coupled plasma mass spectrometry
LOD	Loss on drying
mg/kg/bw	milligram per kilogram of body weight
MgT	magnesium L-threonate

SUMMARY OF THE DATA SUPPORTING A DETERMINATION THAT THE USE OF MAGNESIUM L-THREONATE HYDRATE IN FOODS IS GENERALLY RECOGNIZED AS SAFE (GRAS)

1.0 INTRODUCTION

1.1 Declaration of Intent

In the United States (U.S.), substances added to food are exempt from the definition of "food additive" and thus from the premarket approval requirements outlined in Section 201(s) of the Federal Food, Drug, and Cosmetic Act if their use is generally recognized as safe (GRAS). For substances not already on the list of GRAS substances¹ that are not considered harmful when added to food because of their intrinsic properties and/or because sufficient information about their safety exists, a proposed rule issued in 1997² provides a framework for self-determination of GRAS. A determination that a substance is GRAS requires both technical evidence of safety and a basis to conclude that this technical evidence of safety is generally known and accepted within the qualified scientific community. Self-determination of GRAS may be followed by notification to the Food and Drug Administration (FDA).

Magceutics, Inc., Magceutics hereafter, has developed a magnesium L-threonate (MgT) product, to be marketed under the trademark name Magtein™. MgT is a stable magnesium salt of L-threonic acid having the molecular formula $Mg(C_4H_7O_5)_2$. Magnesium L-threonate is listed by Chemical Abstracts Services (CAS) Registry Number 778571-57-6 and 500304-76-7 (hydrate). The hydrate is the form being considered for addition to food.

Magceutics previously self-affirmed that the use of Magtein™ in foods, is generally recognized as safe (GRAS) and exempt from the premarket approval requirements for food additives. Magnesium has historically been used as an antacid and as an antidote against various poisons, such as acids and arsenic; magnesium salts have also been used as laxatives. However, because magnesium in the form of magnesium L-threonate, has not been consumed as such, a GRAS determination through scientific procedures, rather than through common use in foods, is warranted.

Magtein™ is intended to be used in foods including, alcoholic beverages, baked goods and baking mixes, beverages and beverage bases, breakfast cereals, chewing gum, grain products

¹ 21 CFR 182 – Substances generally recognized as safe; 21 CFR 184 – Direct food substances generally recognized as safe; 21 CFR 186 – Indirect food substances affirmed as generally recognized as safe.

² 62 FR 18938; April 17, 1997.

and pastas, hard candy, processed fruits and fruit juices, processed vegetables and vegetable juices, snack foods, soft candy, and soups and soup mixes, as a substance offering nutritive value as a source of dietary magnesium. Magtein™ will be used in food at levels resulting in an estimated 90th percentile all user intake of 40 mg/kg body weight (bw)/day magnesium L-threonate hydrate, providing 2.7 mg/kg bw/day magnesium (equivalent to 2,246 mg/person/day of magnesium L-threonate hydrate and 173 mg/person/day of magnesium) from all proposed food-uses. The anticipated consumer intake is well below the calculated acceptable daily intake (ADI) of 4,119 mg magnesium L-threonate per day for the average 70-kg person, and the upper tolerable limit of 350 mg per day that has been set for supplemental magnesium by the Food and Nutrition Board of the Institute of Medicine (IOM) (refer to Section 6.0 for a detailed discussion of the ADI).

Magtein™ is proposed as an alternative to other magnesium compounds already added to food; it is not intended to be added to foods in addition to other sources of magnesium. Magnesium L-threonate consumption was found to be associated with greater magnesium bioavailability in rats when compared to magnesium-chloride, -citrate, -glycinate, and -gluconate (Slutsky *et al.*, 2010). It was also able to modestly elevate rat cerebrospinal fluid magnesium levels by 7 to 15% over baseline in 24 days when given orally, unlike other magnesium compounds (Slutsky *et al.*, 2010).

The present document summarizes the available information supporting the safety of Magtein™. The following factors constitute the basis for the GRAS determination:

- Several salts of magnesium are considered GRAS as a direct additive to foods with no limits other than Good Manufacturing Practice (GMP); these magnesium salts include, carbonate, chloride, hydroxide, oxide, phosphate and stearate (21 CFR 184.1).
- Supplemental magnesium has an established upper tolerable limit of 350 mg per day for males and females that are nine years old or older, including pregnant and lactating females, as declared by the IOM.
- The anticipated 90th percentile consumer intake of 2,246 mg/person/day of magnesium L-threonate hydrate (173 mg/person/day of magnesium) is well below the calculated ADI of 4,119 mg magnesium L-threonate per day for the average 70-kg person, and the upper tolerable limit of 350 mg per day that has been set for supplemental magnesium by the IOM.
- L-Threonic acid is a metabolite of ascorbic acid and occurs endogenously in the human body.

- The European Food Safety Authority (EFSA) conducted a comprehensive and critical review of the safety of another salt conjugate of L-threonate, calcium L-threonate. This review established the safety of L-threonate salt. The decision was supported by the following studies: acute toxicity, subchronic and chronic toxicity, genotoxicity, as well as reproductive and developmental toxicity.
- The safety of supplemental magnesium is supported by a vast history of safe consumption by humans.
- Demonstrated quality assurance in manufacturing.

1.2 Background

Magnesium is one of the most common cations in the human body, and is involved in over 300 metabolic reactions, including all reactions that require ATP. Magnesium is required for cellular energy metabolism, membrane stabilization, nerve conduction, calcium channel activity and ion transporters (Abbott and Rude, 1993). Bone contains 50 to 60% of the total content of magnesium in the body. The recommended daily allowance (RDA) of magnesium is 400 mg, although a large percentage (68%) of the population falls below recommended intake levels. In fact, intake of magnesium in aging persons is around 50% of the RDA (Musso, 2009; Ford & Mokdad, 2003).

L-threonate ((2R, 3S)-2,3,4-trihydroxybutyric acid) is an endogenous substance found in certain plants, as well as the human body as a degradation product of vitamin C (EFSA, 2008a; EFSA, 2008b; EFSA, 2008c; Thomas and Hughes, 1983; Helsper and Loewus, 1982). It has been identified in human plasma, urine, as well as in the aqueous humor of the eye (EFSA, 2007).

MgT is a magnesium salt of L-threonic acid having the molecular formula $Mg(C_4H_7O_5)_2$. MgT consumption was found to have a higher magnesium bioavailability in rats when compared to magnesium-chloride, -citrate, -glycinate and -gluconate. It was also able to modestly elevate rat cerebrospinal fluid magnesium levels by 7 to 15% over baseline in 24 days when given orally, unlike other magnesium compounds (Slutsky *et al.*, 2010).

As shown in Figure 1-1, MgT was also found to have increased bioavailability compared to other commercially available magnesium preparations (*i.e.*, magnesium: -chloride, -citrate, -glycinate, and -gluconate), as demonstrated by higher absorption and retention rates of the magnesium ion (Zhao *et al.*, undated). Furthermore, MgT was less likely to induce diarrhea at higher doses (Figure 1-2).

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Figure 1-1 The absorption, excretion and retention rates of different magnesium preparations

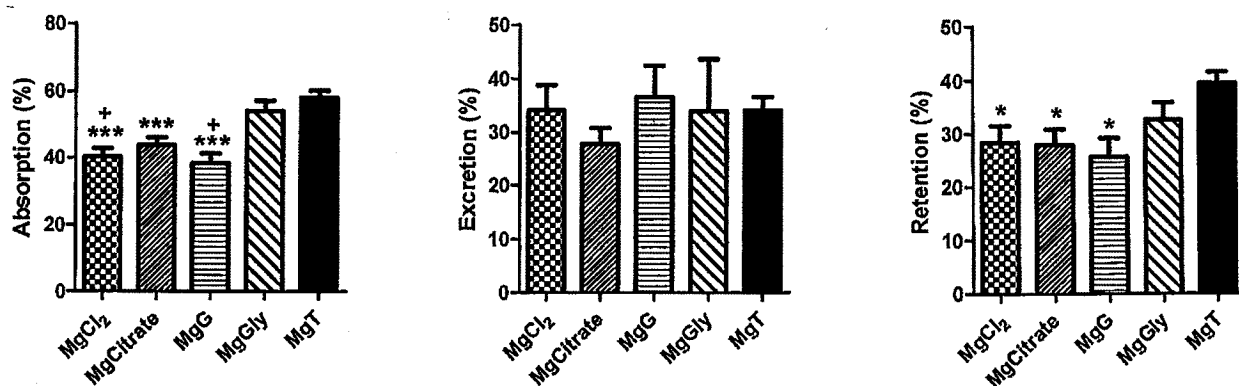
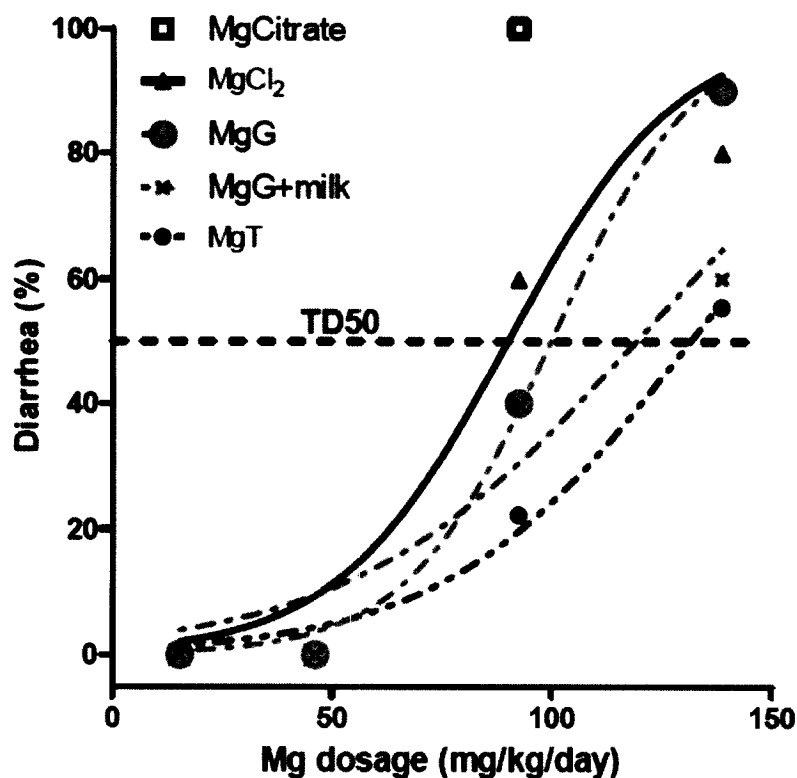


Figure 1-2 Laxative effects of different magnesium preparations



1.3 Historical Information

1.3.1 Magnesium

Magnesium has historically been used as an antacid and as an antidote against various poisons such as acids and arsenic. Magnesium salts have also been used as laxatives. In food sources from plants and animals, magnesium is found predominantly in a chelated form. Magnesium salts in aqueous solutions are mostly dissociated depending on the concentration, pH and temperature of the solvent. Most magnesium salts are hygroscopic and bitter to the taste. A side effect from orally consumed magnesium supplements in large doses is osmotic diarrhea, which resolves with dose reduction. MgT exhibits superior absorption compared to other forms of magnesium and hence may cause fewer of these disturbances. In an unpublished study (Magceutics, Inc., 2012), MgT was compared with other magnesium preparations in a rat study for its ability to induce diarrhea. The dose of magnesium that caused diarrhea in 50% of animals was 136 mg/kg bw (element Mg from MgT), 118 mg/kg bw (from magnesium gluconate in milk), 103 mg/kg (from magnesium gluconate), and 93 mg/kg (from magnesium chloride). Hence, the magnesium from MgT had the least effect based on dosage levels required to induce osmotic diarrhea in rats.

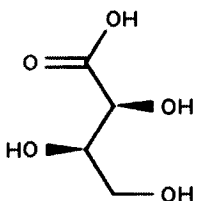
The effects of long-term magnesium administration have been established through several studies and safety evaluations. In published clinical trials, doses ranging from 300 to 1,000 mg/day have been consumed with the duration of dosing as long as five years. In one study involving diabetics, 640 mg of magnesium was given daily for 3 months without observing any significant side effects (Rodriguez-Moran and Guerrero-Romero, 2003). In another study, 300 mg/day was given to patients with neuropathy for five years without reporting any significant side effects (de Lourdes Lima *et al.*, 1998).

1.3.2 L-Threonic Acid

1.3.2.1 Chemical Characterization

Table 1-1 shows the a chemical characteristics of L-threonic acid.

Table 1-1 Chemical characterization of L-threonic acid

Systematic Name	Butanoic acid, 2,3,4-trihydroxy-, (R*, S*)-
CAS Registry Number	3909-12-4
Molecular Formula	C ₄ H ₈ O ₅
Molecular Weight	136.102
Structure	

1.3.2.2 Biosynthesis and Occurrence

Both L-threonic acid and its dissociated salt form, L-threonate, have been identified in plants and animals (Helsper and Loewus, 1982; EFSA, 2007). In humans, L-threonic acid is a metabolite of ascorbic acid (Fay and Verlangieri, 1991; England and Seifter, 1986), and a normal constituent of the body, having been identified in plasma (Deutsch *et al.*, 1999; Harding *et al.*, 1999), urine (Thompson *et al.*, 1975; Chalmers *et al.*, 1976; Lawson *et al.*, 1976), and the aqueous humor of the eye (Harding *et al.*, 1999).

Two mechanisms have been proposed for the endogenous formation of L-threonic acid in the human body. The first mechanism was described by Fay and Verlangieri (1991); the authors reported that the metabolism of ascorbic acid involves the oxidation of ascorbic acid to dehydroascorbic acid which then undergoes a hydrolytic ring cleavage to form 2,3 diketo-L-gulonic acid. Diketo-L-gulonic acid may become decarboxylated to form L-lyxonic acid, L-xylose, and L-xylonic acid. Further oxidation of 2,3 diketo-L-gulonic acid results in the formation of two other metabolic products namely, L-threonic acid and oxalic acid (Levine and Kyoji, 1985). The second mechanism, according to Thornalley (1998), is believed to be the liver's glyoxalase system, which consists of two enzymes, glyoxylase I and II, and a glutathione cofactor. The glyoxalase system catalyzes the conversion of alpha-oxoaldehydes to their corresponding aldonic acids, including L-threonate.

In addition to its endogenous occurrence in humans, L-threonic acid has been detected in a variety of foodstuffs such as, canned mushrooms, fruit juice preparations and processed meat products (Thomas and Hughes, 1983). Occurrence of L-threonic acid in foods is the result of it being a breakdown product of ascorbic acid, a widely used technological aid in the food industry. Ascorbic acid is extremely labile during food processing and storage, thus, little of the added ascorbic acid is present in the foodstuffs purchased by consumers. For example, of the ascorbic acid added during the Chorleywood Bread Process (75 ppm) practically none was present in the marketed product (Chamberlain *et al.*, 1966). Instead, Thewliss (1971) reported that 52% of the ascorbic acid used in the Chorleywood Bread Process was left in the bread as threonic acid.

1.3.2.3 Pharmacokinetics of L-Threonate

The pharmacokinetics of L-threonate following single or multiple oral administrations and its safety profile were investigated by Wang *et al.* (2011) in healthy Chinese volunteers. For the single-dose study, 12 male subjects were assigned to receive a single oral dose of calcium L-threonate (675, 2025, or 4050 mg following an overnight fast), or 2025 mg within 30 minutes after consuming breakfast. A standard meal was provided at 4 and 10 h after dosing. Serial blood samples were collected at the following time points: 0 (pre-dose), 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 6, 8, 12, 24, and 48 h. Fractionated urine samples were collected at the following time intervals: 0 (pre-dose), 0-3, 3-6, 6-9, 9-12, and 12-24 h. For the multiple-dose study, 14 subjects (7/sex) received an oral dose of 2025 mg calcium L-threonate following an overnight fast on the morning of d 1 and d 7, and serial blood samples were collected at the following time points: 0 (pre-dose), 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 6, 8, 12, 24, and 48 h. From d 3 to d 6, subjects received an oral dose of 2025 mg calcium L-threonate twice daily with a dose interval of 12 h.

For both the single- and multiple-dose studies, concentrations of L-threonate in plasma and urine were determined using high-performance liquid chromatography-tandem mass spectrometry (HPLC-MS/MS). Pharmacokinetic parameters of L-threonate were calculated using non-compartmental analysis with WinNonlin software. In addition, safety and tolerability of calcium L-threonate were evaluated through adverse events reported by the investigators and subjects, as well as on clinical laboratory measurements (*i.e.*, blood chemistry, hematology, urinalysis, and liver functions), 12-lead ECG, physical examination, and vital signs. Adverse events were assessed by the investigators with respect to severity (mild, moderate, severe, or life-threatening) and the relationship to the study treatment (reasonably or possibly related, not reasonably or possibly related).

In the single-dose study, all subjects completed the trial. Pharmacokinetic parameters are summarized in Table 1-2. Results indicated that L-threonate was absorbed rapidly with a median t_{max} of 2 h across all of the dose groups. Following peak exposure, the plasma disposition of L-threonate was also rapid, having a mean $t_{1/2}$ of 2.5 h, which was independent of

dose. Area under curve (AUC) and C_{max} increased with increasing dose, however, dose proportionality was not noted over the range of 675 to 4050 mg. With respect to the effect of food intake on the pharmacokinetics of L-threonate, results indicated that C_{max} and AUC in fed subjects were increased compared to fasted subjects. Cumulative urinary excretion of L-threonate over 24 h represented 5.9% of the administered dose with a mean Cl/r of 0.8 L/h.

Table 1-2 Pharmacokinetic parameters of L-threonate following single oral administration to healthy Chinese subjects

Parameter	Dose (mg)			
	675 (n=12)	2025 (n=12)	2025 (fed) (n=12)	4050 (n=12)
t_{max} (median, h)	2.0 ± 0.5	2.0 ± 0.4	3.0 ± 0.5	2.0 ± 0.7
C_{max} (mg/L)	15.5 ± 4.6	32.3 ± 9.9	39.1 ± 12.0	42.8 ± 15.1
$t_{1/2}$ (h)	2.4 ± 1.3	2.7 ± 0.8	2.3 ± 0.4	2.7 ± 0.6
AUC _{0-t} (mg/L·h)	76.2 ± 30.1	150.1 ± 41.8	199.7 ± 69.5	218.3 ± 90.8
AUC _{0-∞} (mg/L·h)	77.7 ± 30.7	152.9 ± 42.9	203.6 ± 70.4	220.9 ± 90.0
V_z/F (L)	28.9 ± 6.0	53.6 ± 14.8	37.4 ± 13.6	76.5 ± 22.4
Cl/F (L/h)	9.8 ± 3.3	14.5 ± 4.9	11.4 ± 4.9	21.3 ± 8.7
Cl/r (L/h)	1.0 ± 0.7	0.7 ± 0.5	0.7 ± 0.3	0.8 ± 0.5
Au _{0-t} (mg)	69.8 ± 48.2	84.6 ± 75.7	132.8 ± 62.4	135.5 ± 136.6
Urinary excretion rate (%)	10.30	4.20	6.60	3.30

(mean ± SD)

In the multiple-dose study, 2 of the 14 subjects withdrew on d 3 due to personal reasons. Pharmacokinetic parameters are summarized in Table 1-3. The mean steady-state $t_{1/2}$ was 2.1 ± 0.6 h, which was comparable to the value of a single-dose (2.0 ± 0.7 h). The accumulation index was 1.086 based on AUC_{0-t} and 1.102 based on C_{max} , indicating that there was no further accumulation of L-threonate after multiple administrations.

Table 1-3 Pharmacokinetic parameters of calcium L-threonate in healthy Chinese subjects following multiple dose of L-threonate

Parameter	d 1 (n=12)	d 7 (n=12)
t_{max} (median, h)	1.6 ± 0.6	1.6 ± 0.4
C_{max} (mg/L)	43.8 ± 16.4	47.7 ± 15.3
$t_{1/2}$ (h)	2.1 ± 0.6	2.0 ± 0.7
AUC _{0-t} (mg/L·h)	204.1 ± 88.2	216.2 ± 68.1
AUC _{0-∞} (mg/L·h)	207.5 ± 87.0	220.4 ± 67.1
V_z/F (L)	34.4 ± 16.5	29.3 ± 10.2
Cl/F (L/h)	12.3 ± 6.6	13.6 ± 3.62
C_{avg} (mg/L)	-----	14.6 ± 2.66
AUC _{ss} (mg/L·h)	-----	176.0 ± 31.6
DF (%)	-----	3.1 ± 1.1
R_{Cmax}	-----	1.102
R_{AUC}	-----	1.086

(mean ± SD)

DF: degree of fluctuation

Finally, the authors reported that calcium L-threonate was well-tolerated, with no serious adverse events occurring in subjects throughout the study.

1.3.2.4 Threonate Salts

In addition to MgT, other mineral conjugates of threonate exist; for example, ferrous L-threonate has been used as a beneficial treatment for iron-deficiency anemia (Lin *et al.*, 2008). Calcium L-threonate has been developed for use in calcium supplementation and osteoporosis treatment. The dietary supplement, BioCalth, formulated with calcium threonate, has been on the market since 2001; if used according to the manufacturer's recommendations, BioCalth would provide a daily dose of 2325 mg calcium threonate, and 300 mg calcium (elemental) (BioCalth, undated). Finally, Ester-C®, a calcium ascorbate product containing a small amount of threonate (< 3%) in the form of calcium threonate, is marketed for its reported ability to increase vitamin C absorption in humans (Pancorbo *et al.*, 2008). This claim is supported by the results of an *in vitro* study which showed that incubation with calcium L-threonate resulted in a dose-dependent increase in the uptake of ascorbic acid by human T lymphoma cells (Fay and Verlangieri, 1991).

EFSA conducted a comprehensive and critical review of the safety of calcium L-threonate as a nutritional substance in food supplements. The Committee noted that although L-threonate occurs endogenously in the human body, data following dietary exposure to this compound are not available (EFSA, 2008a). Section 5.4 provides a summary of the safety studies as presented by EFSA during their evaluation of the safety of calcium L-threonate.

2.0 OPINIONS OF REGULATORY AGENCIES AND SCIENTIFIC ORGANIZATIONS

2.1 Magnesium

In accordance with 21 CFR 184.1, several salts of magnesium are considered GRAS as a direct additive to foods with no limits other than GMP; these magnesium salts include, carbonate, chloride, hydroxide, oxide, phosphate and stearate.

The Daily Reference Value (DRV) for magnesium, as defined by 21 CFR 101.9(c)(9), is 400 mg per day. Intake of magnesium from food is known to be lower than recommended in the U.S. population (Ervin *et al.*, 2000; King, 2005). Older adults are especially prone to magnesium deficiency, and deficiency has been associated with a number of disorders (Ford & Mokdad, 2003). For example, Nielsen *et al.* (2007) noted that a magnesium deficient diet induced heart arrhythmias, impaired glucose homeostasis, and altered cholesterol and oxidative metabolism in post-menopausal women.

As stated in Section 1.2, magnesium is one of the most common cations in the human body, and is involved in over 300 metabolic reactions, including all reactions that require ATP. As such, it is not unexpected that diets deficient in magnesium have been associated with a

disruption of ion membrane transport and more recently with bone loss, making it a risk factor for osteoporosis (Rude *et al.*, 2009).

An upper tolerable limit of 350 mg per day for males and females that are nine years old or older, including pregnant and lactating women, has been set for magnesium by the Food and Nutrition Board of the Institute of Medicine (IOM) in 2004. This upper limit represents supplemental intake, and not intake from food or water.

2.2 L-Threonate

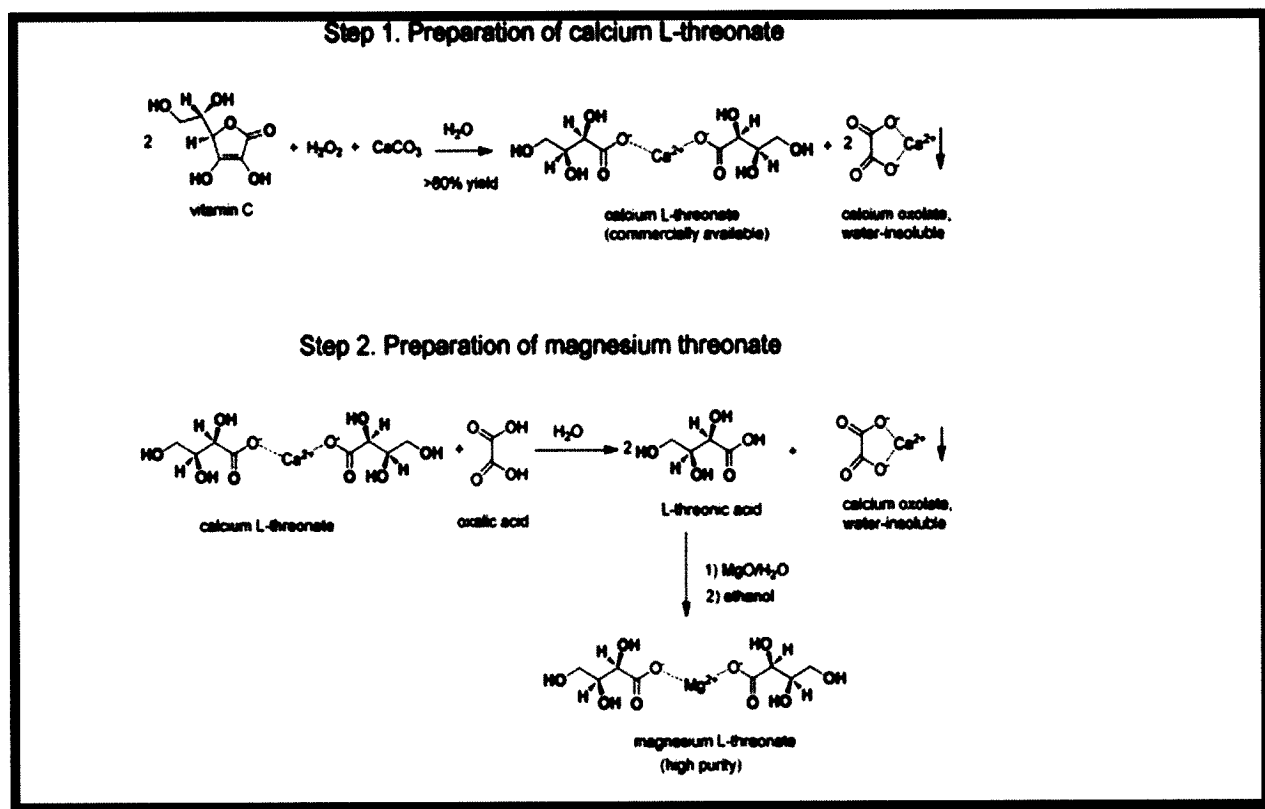
EFSA conducted a comprehensive and critical review of the safety of another salt of L-threonate, calcium L-threonate, as a nutritional substance in food supplements. The Committee concluded that calcium L-threonate was safe at the proposed use level indicated by the petitioner, estimated to amount to 1350 to 2700 mg of L-threonate per person per day, corresponding to 22.5 to 45 mg/kg bw/day for a 60 kg person. A large battery of toxicology studies including acute, subchronic and chronic toxicity, genotoxicity, mutagenicity, and reproductive and developmental toxicity, conducted with calcium-L-threonate supported EFSA's decision (EFSA, 2008a); these studies are discussed in detail in Section 5.4.

3.0 MANUFACTURING AND PRODUCTION

3.1 Overview

MgT is a white powder that is soluble in water at greater than 100 mg/mL. It has a molecular weight of 294.5 g/mol (anhydrous) and 312.51 g/mol (monohydrate). The manufacturing process for MgT is shown in Figure 3-1. Briefly, MgT is prepared in two steps. The first step involves reacting vitamin C, hydrogen peroxide and calcium carbonate to yield calcium L-threonate. A side product of this initial reaction is water-insoluble calcium oxalate. In the second step, calcium L-threonate is combined with oxalic acid to remove calcium, followed by neutralization of the resulting L-threonic acid using magnesium oxide to yield MgT. Water and ethanol are the two solvents used in the manufacturing of MgT. Elemental analytical results show that MgT prepared using the current procedure is typically associated with one molecule of water.

Figure 3-1 Synthesis of magnesium L-threonate



3.2 Chemical Characterization

MgT is a hydrate. Loss on drying (LOD) testing (105° C for 4 hours) only removes volatile moisture.

The theoretical composition of MgT hydrate is as follows:

Molecular formula:	$C_8H_{14}MgO_{10} \cdot H_2O$
Molecular weight:	312.51
Hydrate:	5.8%
MgT:	94.2%
Magnesium:	7.78%

000021

The Vacuum Oven Method was used to determine the Water of Hydration of MgT, Lot Number 20101001 (Appendix 2).

Moisture by Vacuum Oven:	6.87%
LOD from Certificate of Analysis:	0.5%
Calculated Hydrate:	6.37%
Theoretical Hydrate:	5.8%
Difference:	0.57%

3.3 Raw Materials

Raw materials used in the manufacturing of magnesium L-threonate include vitamin C, hydrogen peroxide, calcium carbonate, magnesium oxide and oxalic acid (dehydrate). Calcium L-threonate (China) is an intermediate in the overall manufacturing scheme. Because calcium L-threonate is already a widely available product in GMP quality, MgT can be directly made from it in a single step. In such a case, raw materials for MgT manufacturing will only include calcium L-threonate, magnesium oxide and oxalic acid. The two solvents used are ethanol and deionized water.

3.4 Quality Management

The product is manufactured to ensure that each lot completely meets specifications as shown in Table 3-1. Prior to leaving the facility, the following analyses are conducted: elemental analysis (titration, ICP), heavy metals analysis (ICP-MS), solubility, assay (titration), and identity testing (FTNIR). Details on the product's specifications, batch analysis data, and residue solvent analysis are provided in Appendix 2.

3.5 Product Specifications

The specifications for MgT are summarized in Table 3-1.

Table 3-1 Specifications for MgT

Analysis	Specification
Identification	Matches standard (FT-NIR/FT-IR)
Color and form	White powder
Water solubility	>100 mg/mL
Assay	98-102%
Loss on drying	≤1.0%
Magnesium	7.2 to 8.3%
L-Threonate	82 to 91%
Mercury	≤2 ppm
Lead	≤1 ppm
Cadmium	≤2 ppm
Arsenic	≤2 ppm
Total plate count	≤3,000 cfu/g
Yeast and mold	≤300 cfu/g
<i>E. coli</i>	Negative

3.6 Batch Analysis

Batch analysis data of MgT (Lot Number 20101001) are presented in Table 3-2. The data show that the product met all established specifications. Note, the batch (Lot Number 20101001), was comprised of 87.4% by weight L-threonate and 7.6% by weight magnesium.

Table 3-2 Batch analysis data of MgT

Parameter	Specification	Method	Lot Number 20101001
Identification	Matches standard	FT-NIR/FT-IR	Conforms
Color and form	White powder	NA	Conforms
Solubility	>100 mg/mL	NA	Conforms
Assay	98-102%	NA	Conforms
Loss on drying	≤1.0%	NA	Conforms
Magnesium	7.2 to 8.3%	Titration	7.6% (76 mg/g)
L-Threonate	82 to 91%	NA	Conforms
Mercury	≤2 ppm	ICP/MS	<0.05 ppm
Lead	≤1 ppm	ICP/MS	<0.05 ppm
Cadmium	≤2 ppm	ICP/MS	<0.05 ppm
Arsenic	≤2 ppm	ICP/MS	<0.2 ppm
Total plate count	≤3,000 cfu/g	Micro	≤3,000 cfu/g
Yeast and mold	≤300 cfu/g	Micro	≤300 cfu/g
<i>E. coli</i>	Negative	Micro	Negative

3.7 Residual Solvent Analysis

Lot Number 20101001 of MgT was analyzed for the presence of residual solvents using GC-MS by an independent laboratory. As shown in Appendix 2, the lot was free of the following solvents: methanol, acetone, 1-butanol, ethyl acetate, benzene, toluene, isopropanol,

chloroform, 1,1,2-trichloroethane, hexane, pentane, butyl acetate, ethanol, 1,2-dichloroethane, cyclohexane, heptane, methylethylketone (MEK) and methyl-tert-butyl ether (MTBE) (See Appendix 2).

3.8 Additional Batch Analysis Data

Subsequent to the Expert Panels' review in May 2011, Magceutics conducted additional analyses on batches of MgT, manufactured from February to May 2012, to determine percent Mg, percent threonic acid, heavy metal levels and microbiological purity; the results of these analyses are shown in Table 3-3.

Table 3-3 Additional batch analyses data

Parameter	Specification	Lot Number					
		20120208	20120301	20120402	20120502	20120506	20120603
Mg (%)	7.2 to 8.3%	7.63%	7.54%	7.65%	7.74%	7.80%	7.84%
Threonic acid (%)	82 to 91%	88.8%	88.8%	89.1%	88.2%	87.7%	86.3%
Lead (ppm)	≤1 ppm	0.057 ppm	0.208 ppm	0.087 ppm	0.151 ppm	0.069 ppm	0.083 ppm
Arsenic (ppm)	≤2 ppm	0.370 ppm	0.779 ppm	0.494 ppm	0.508 ppm	0.365 ppm	0.745 ppm
Cadmium (ppm)	≤2 ppm	0.001ppm	0.001 ppm	0.002 ppm	0.005 ppm	0.002 ppm	0.003 ppm
Mercury (ppm)	≤2 ppm	<0.001 ppm	0.021 ppm	0.004 ppm	0.002 ppm	<0.001 ppm	<0.001 ppm
Total plate count	≤3,000 cfu/g	<10 cfu/g	<10 cfu/g	75 cfu/g	<10 cfu/g	<10 cfu/g	<10 cfu/g
Yeast and mold	≤300 cfu/g	<10 cfu/g	<10 cfu/g	<10 cfu/g	<10 cfu/g	<10 cfu/g	<10 cfu/g
<i>E. coli</i>	Negative	Negative	Negative	Negative	Negative	Negative	Negative
<i>Salmonella</i>	Negative	Negative	Negative	Negative	Negative	Negative	Negative

4.0 PROPOSED USES AND ANTICIPATED CONSUMER INTAKE

4.1 Proposed Uses

For the purpose of this GRAS notification, Magceutics' MgT, manufactured in accordance with GMP as specified in 21 CFR 110, may be used for its nutritive value as a source of dietary magnesium, at levels that do not exceed the levels of addition defined by this document, in the following categories of foods as defined in 21 CFR §170.3(n): alcoholic beverages, baked goods and baking mixes, beverages and beverage bases, breakfast cereals, chewing gum, grain products and pastas, hard candy, processed fruits and fruit juices, processed vegetables and vegetable juices, snack foods, soft candy, and soups and soup mixes. It is important to note that, although meat and dairy food products were among the uses reviewed and considered GRAS by an expert panel, at the present time, Magceutics does not intend to pursue such uses. Therefore, a new intake assessment (Appendix 4) that omits these food categories was performed; for completeness, the original intake assessment with all food categories reviewed by the expert panel is also attached (Appendix 3). The individual proposed food-uses and use-levels for magnesium L-threonate employed in the current intake analysis are summarized in Table 4-1. Food codes representative of each proposed food-use were chosen from the NHANES 2009-2010 (CDC, 2011; USDA, 2012). Food codes were grouped in food-use categories according to Title 21, Section §170.3 of the Code of Federal Regulations (CFR, 2012). Product-specific adjustment factors were developed based on data provided in the standard recipe file for the Continuing Survey of Food Intakes by Individuals (CSFII) 1994-1996, 1998 survey (USDA, 2000). All food codes included in the current intake assessment are listed in Appendix 4.

Table 4-1 Summary of the Individual Proposed Uses and Use-Levels of Magnesium L-Threonate in the United States (NHANES 2009-2010)			
Food Category	Food-Uses	Mg Level (%)*	Mg L-Threonate Use-Levels (%)*
Alcoholic Beverages	Distilled Liquors	0.006815	0.0885
	Malted Beverages	0.006815	0.0885
	Wine	0.006815	0.0885
Baked Goods and Baking Mixes	Biscuits	0.00924	0.12
	Breads and Rolls, including bagels and pizza dough	0.00924	0.12
	Cakes and Cupcakes	0.00924	0.12
	Cookies and Brownies	0.00924	0.12
	Cornbread and Tortillas	0.00924	0.12
	Crackers	0.00924	0.12
	Muffins and English Muffins	0.00924	0.12

Table 4-1 Summary of the Individual Proposed Uses and Use-Levels of Magnesium L-Threonate in the United States (NHANES 2009-2010)			
Food Category	Food-Uses	Mg Level (%)*	Mg L-Threonate Use-Levels (%)*
	Pancakes and Waffles	0.00924	0.12
	Pastries, including Doughnuts, Pies and Turnovers	0.00924	0.12
Beverages and Beverage Bases	Bottled Water	0.006815	0.0885
	Carbonated Fruit drinks	0.006815	0.0885
	Carbonated Soft Drinks	0.006815	0.0885
	Energy and Sports Drinks	0.006815	0.0885
	Fruit Drinks and Ades (RTD and powder)	0.006815	0.0885
Breakfast Cereals	Instant and Regular Hot Cereals	0.00924	0.12
	Ready-to-Eat Breakfast Cereals	0.00924	0.12
Chewing Gum	Chewing Gum	0.00924	0.12
Grain Products and Pastas	Cereal Grains, prepared (rice, corn, oats, rye, wheat, flour, etc)	0.00924	0.12
	Granola, Meal Replacement, and Breakfast Bars	0.00924	0.12
	Pasta and Noodles	0.00924	0.12
Hard Candy	Hard Candy	0.00924	0.12
Processed Fruits and Fruit Juices	Fruit Juice	0.006815	0.0885
	Processed Fruits	0.00924	0.12
Processed Vegetables and Vegetable Juices	Vegetable Juice	0.006815	0.0885
Snack Foods	Salty Snacks	0.00924	0.12
Soft Candy	Chocolate and Candy Bars	0.00924	0.12
	Soft Candy	0.00924	0.12
Soups and Soup Mixes	Non-cream soups	0.003642	0.0473

*Magnesium L-threonate hydrate contains elemental magnesium in a concentration of 7.7%

Estimates for the intake of magnesium L-threonate were based on the proposed food-uses and use-levels in conjunction with food consumption data included in the US National Center for Health Statistics' (NCHS) National Health and Nutrition Examination Surveys (NHANES) (CDC, 2011; USDA, 2012).

4.2 Anticipated Consumer Intake

Consumption data and information pertaining to the individual proposed food-uses of magnesium L-threonate were used to estimate the all-person and all-user intakes of magnesium L-threonate for specific demographic groups and for the total U.S. population. This type of intake methodology is generally considered to be 'worst case' as a result of several conservative assumptions made in the consumption estimates. For example, it is often assumed that all food products within a food category contain the ingredient at the maximum specified level of use. In addition, it is well-established that the length of a dietary survey affects the estimated consumption of individual users. Short-term surveys, such as the typical 2- or 3-day dietary surveys, may overestimate the consumption of food products that are consumed relatively infrequently.

4.2.1 Estimated Intake of Magnesium L-Threonate

The estimated total intake of magnesium L-threonate from all current and proposed food-uses in the U.S. by population group is summarized in Table 4-2; Table 4-3 presents these data on a per kilogram body weight basis.

Table 4-2 Summary of the Estimated Daily Intake of Magnesium L-Threonate from All Proposed Food-Uses in the U.S. by Population Group (2009-2010 NHANES Data)							
Population Group	Age (years)	All Person (mg)		All User (mg)			
		Mean	90th Percentile	Percent Users	Actual # of Users	Mean	90th Percentile
Infants	0 to 2	356	868	81.0	672	439	927
Children	3 to 11	763	1,265	100.0	1,430	763	1,265
Female Teenagers	12 to 19	1,043	1,683	100.0	520	1,043	1,683
Male Teenagers	12 to 19	1,352	2,521	100.0	567	1,352	2,521
Female Adults	20 and up	1,066	1,955	99.9	2,647	1,067	1,962
Male Adults	20 and up	1,522	2,827	100.0	2,387	1,522	2,827
Total Population	All Ages	1,169	2,244	99.1	8,223	1,180	2,246

Table 4-3 Summary of the Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from All Proposed Food-Uses in the U.S. by Population Group (2009-2010 NHANES Data)							
Population Group	Age (years)	All Person (mg/kg bw)		All User (mg/kg bw)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	28.9	67.3	81.0	672	35.7	70.5
Children	3 to 11	28.5	49.5	100.0	1,430	28.5	49.5
Female Teenagers	12 to 19	17.5	31.2	100.0	520	17.5	31.2
Male Teenagers	12 to 19	20.0	35.7	100.0	567	20.0	35.7
Female Adults	20 and up	14.7	28.2	99.9	2,647	14.7	28.2
Male Adults	20 and up	17.5	31.9	100.0	2,387	17.5	31.9
Total Population	All Ages	18.4	35.3	99.1	8,223	18.6	35.3

The percentage of users was high among all age groups evaluated in the current intake assessment; greater than 81.0% of the population groups consisted of users of those food products in which magnesium L-threonate is currently proposed for use (Table 4-2). All population groups with the exception of infants were reported to consist wholly of consumers of products containing magnesium L-threonate, with percent users at 100%. Infants had the lowest percent users at 81.0%. Large user percentages within a population group typically lead to similar results for the all-person and all-user consumption estimates. Consequently, only the all-user intake results will be discussed in detail.

Of the individual population groups, male adults (aged 20 years and older) were determined to have the greatest mean and 90th percentile all-user intakes of magnesium L-threonate on an absolute basis, at 1,522 and 2,827 mg/person/day, respectively, while infants (aged 2 years and under) had the lowest mean and 90th percentile all-user intakes of 439 and 927 mg/person/day, respectively (Table 4-2).

On a body weight basis, infants were identified as having the highest mean and 90th percentile all-user intakes of any population group, of 35.7 and 70.5 mg/kg body weight/day, respectively. Female adults (aged 20 years and over) had the lowest mean and 90th percentile all-user intakes of 14.7 and 28.2mg/kg body weight/day, respectively (Table 4-3).

4.2.2 Estimated Intake of Magnesium from Use of Magnesium L-Threonate

Estimates for the total daily intakes of magnesium from the use of magnesium L-threonate in proposed food-uses are provided in Tables 4-4 and 4-5.

As with the results for magnesium L-threonate, male adults were determined to have the greatest mean and 90th percentile all-user intakes of magnesium on an absolute basis, at 117 and 218 mg/person/day, respectively, while infants had the lowest mean and 90th percentile all-user intakes of 34 and 71 mg/person/day, respectively (Table 4-4).

Table 4-4 Summary of the Estimated Daily Intake of Magnesium from All Proposed Food-Uses of Magnesium L-Threonate in the U.S. by Population Group (2009-2010 NHANES Data)							
Population Group	Age (years)	All Person (mg)		All User (mg)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	27	67	81.0	672	34	71
Children	3 to 11	59	97	100.0	1,430	59	97
Female Teenagers	12 to 19	80	130	100.0	520	80	130
Male Teenagers	12 to 19	104	194	100.0	567	104	194
Female Adults	20 and up	82	151	99.9	2,647	82	151
Male Adults	20 and up	117	218	100.0	2,387	117	218
Total Population	All Ages	90	173	99.1	8,223	91	173

Furthermore, on a body weight basis, infants were identified as having the highest mean and 90th percentile all-user intakes of magnesium of any population group, of 2.7 and 5.4 mg/kg body weight/day, respectively. Female adults had the lowest mean and 90th percentile all-user intakes of magnesium, of 1.1 and 2.2 mg/kg body weight/day, respectively (Table 4-5).

Table 4-5 Summary of the Estimated Daily Per Kilogram Body Weight Intake of Magnesium from All Proposed Food-Uses of Magnesium L-Threonate in the U.S. by Population Group (2009-2010 NHANES Data)							
Population Group	Age (years)	All Person (mg/kg bw)		All User (mg/kg bw)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	2.2	5.2	81.0	672	2.7	5.4
Children	3 to 11	2.2	3.8	100.0	1,430	2.2	3.8
Female Teenagers	12 to 19	1.3	2.4	100.0	520	1.3	2.4
Male Teenagers	12 to 19	1.5	2.7	100.0	567	1.5	2.7
Female Adults	20 and up	1.1	2.2	99.9	2,647	1.1	2.2
Male Adults	20 and up	1.4	2.5	100.0	2,387	1.4	2.5
Total Population	All Ages	1.4	2.7	99.1	8,223	1.4	2.7

4.2.3 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses in the U.S.

Estimates for the mean and 90th percentile daily intakes of magnesium L-threonate from each individual food category (summarized in Tables A-1 to A-7 and B-1 to B-7 of Appendix 4, on a mg/day and mg/kg body weight/day basis, respectively) show the total U.S. population as being significant consumers of breads and rolls (50.8 to 91.7% users), bottled water (34.2 to 55.2% users), and carbonated soft drinks (6.2 to 53.4% users).

In terms of contribution to total mean intake of magnesium L-threonate, bottled water (contributed 23.5 to 32.1% to total mean intakes) and carbonated soft drinks (contributed 12.8 to 17.5% to total mean intakes) were the 2 main sources of intake among female and male teenagers and female and male adults on both an absolute and on a mg/kg body weight basis. Among infants, the consumption of bottled water (17.6% to the total mean intakes) and fruit juice (25.3% to the total mean intakes) made the greatest contribution to the intakes on an absolute and mg/kg body weight basis, while among children, the consumption of bottled water (19.1% to the total mean intakes) and fruit drinks and ades (14.2% to the total mean intakes) made the greatest contributions to the intakes on an absolute and mg/kg body weight basis. Chewing gum and hard candy each individually contributed $\leq 0.3\%$ to total mean magnesium L-threonate intakes across all population groups (see Tables A-1 to A-7 and/or B-1 to B-7 of Appendix 4 for further details).

5.0 SAFETY

5.1 Overview

As described in Section 3.0, MgT is prepared by reacting vitamin C, hydrogen peroxide and calcium carbonate to yield calcium L-threonate. Calcium L-threonate is combined with oxalic acid and then magnesium oxide and ethanol to yield magnesium L-threonate.

Mammalian acute toxicity, subchronic toxicity and reproductive and developmental toxicity studies are available for calcium L-threonate. In the absence of any safety data on magnesium L-threonate, the safety data on calcium L-threonate evaluated by EFSA was used to support the safety of MgT. Although Section 5.4 provides a summary of the safety studies considered by EFSA, an overview of the Panel's findings concerning estimated safe intake levels of calcium L-threonate is provided below.

Based on subchronic studies with calcium L-threonate, the Panel identified a NOAEL of 4 g/kg bw/day in the rat with regard to effects on blood coagulation time and accretion of the thyroid gland, and of 1 g calcium L-threonate/kg bw/day in the dog with regard to hyperplasia of the thyroid gland. The Panel noted that the effects on blood coagulation time and the thyroid gland

were reversible and that a mild accretion in the thyroid gland in rats was limited to males only. The Panel further noted that these effects are likely to be attributed to the high dosage of calcium administered over a long period. A high concentration of calcium ions can result in accelerated blood coagulation. It can influence intestinal absorption of iodine and reduce/suppress the secretion of thyroxin by the thyroid gland. The NOAELs are equivalent³ to 516 mg calcium/kg bw/day and 3484 mg L-threonate/kg bw/day in the rat, and to 129 mg calcium/kg bw/day and 871 mg L-threonate/kg bw/day in the dog.

Reproductive and developmental toxicity studies in mice indicated that calcium L-threonate at doses up to 6 g/kg bw/day had no adverse effect on the fertility or fetal development, and did not cause maternal toxicity. The NOAEL is equivalent³ to 775 mg calcium/kg bw/day and 5225 mg L-threonate/kg bw/day.

5.2 Safety of Magnesium L-Threonate

Sections 5.2.1.1 through 5.2.1.3 summarize preclinical studies conducted with MgT to examine its effects on lifespan, body weight, and physiological endpoints including, memory and learning. Although these are not safety studies *per se*, they are considered supportive evidence for the safety of MgT, given the lack of adverse effects noted.

5.2.1 Preclinical Studies

5.2.1.1 *Effects of magnesium L-threonate on learning and memory in the rat*

Slutsky *et al.* (2010) conducted a number of experiments aimed at: (i) identifying a suitable magnesium compound with high bioavailability; (ii) measuring the effect of MgT on hippocampus-dependent forms of memory and learning abilities (*i.e.*, spatial working memory, spatial long-term memory, and memory recall); and (iii) exploring the possible molecular mechanisms underlying MgT-induced memory enhancement.

With respect to identifying a magnesium compound with high bioavailability, Slutsky *et al.* (2010) noted that a separate unpublished study was conducted to compare the bioavailability (evaluated by absorption, excretion, and retention rate of magnesium) of 4 commercially available magnesium compounds namely, magnesium-chloride, -citrate, -glycinate, and – gluconate, as well as 2 magnesium preparations developed by the authors (*i.e.*, MgT and magnesium-gluconate in milk). The study showed that both MgT and magnesium-gluconate in milk had higher bioavailability compared to the 4 commercially available magnesium compounds. In the current publication, the authors tested MgT and magnesium-gluconate in milk, to determine their ability to increase cerebrospinal fluid (CSF) magnesium concentration.

³ Calculated based on the composition of CaT: threonate 87.1% by weight and calcium (as Ca)12.9% by weight.

Total magnesium concentration in CSF of rats was measured prior to magnesium treatment, (day 0), 12, and 24 days after magnesium treatment (604 mg/kg/day MgT *via* drinking water). Results showed that only MgT elevated CSF magnesium concentration significantly compared to controls.

Next, the authors examined the effect of MgT on hippocampus-dependent forms of memory and learning abilities (*i.e.*, spatial working memory, spatial long-term memory, and memory recall) by giving young and old rats either 604 mg/kg/day of MgT (50 mg/kg/day elemental magnesium) *via* drinking water, or standard feed containing 0.15% elemental magnesium for 60 to 72 days (young and old rats, respectively). Spatial working memory and spatial long-term memory were assessed using a T-maze non-matching-to-place task (Dudchenko, 2001), and the Morris water maze (Morris, 1984), respectively. Additionally, memory recall (*i.e.*, the ability to retrieve memories based on incomplete information) was tested by comparing the dependence of spatial memory recall on the integrity of the extra-maze cues in young and aged control and MgT-treated (for 1 month) rats following a water maze training period. Slutsky *et al.* (2010) reported that subacute treatment (1 month) with MgT (604 mg/kg/day) did not influence water and food intake, body weight, or overall mobility. However, elevation of brain magnesium led to significant enhancement of hippocampus-dependent spatial learning and memory in both young and old rats. MgT treatment also enhanced memory recall under partial information conditions in aged rats, but had no effect on the young.

As a final objective, Slutsky *et al.* (2010) explored the potential mechanism of action of MgT in cognitive functions. In the brain, magnesium is important for controlling NMDA receptor (NMDAR) ion channel opening. A property of the NMDAR is its voltage-dependent activation, a result of ion channel block by extracellular magnesium ions. The activation of NMDAR is critical for synaptic plasticity and memory.

The authors hypothesized that magnesium is a positive regulator of synaptic plasticity and that increasing concentrations within the physiological range leads to permanent enhancement of synaptic plasticity in networks of hippocampal neurons. In light of this, Slutsky *et al.* (2010) measured NMDAR currents *in vitro* by exposing cell cultures to different concentrations of extracellular magnesium ions 0.8 mM (control group) and 1.2 mM (acute and chronic groups) after glutamate iontophoresis. Subsequently, the authors isolated postsynaptic L-glutamate bound to NMDAR (I_{NMDA}) and plotted the percent change of I_{NMDA} following acute (< 1hr) and chronic elevation of magnesium as a function of membrane potential. Membrane potential is the difference in electrical potential between the interior and the exterior of a biological cell. The values of membrane potential used on study ranged from -40 mV to -80 mV. The rise and fall in membrane potential correlates with the activation of a synapse. When magnesium was elevated acutely, Slutsky *et al.* (2010) found the amplitude of I_{NMDA} near resting membrane potential was reduced by ~50%, suggesting that it is very sensitive to a small increase in

magnesium and the reduction in membrane potential reflects an inhibitory postsynaptic potential. At higher magnesium levels, strong depolarization was capable of removing magnesium from NMDAR. Strong depolarization of the post-synaptic cell completely displaces the magnesium ions that block NMDA ion channels and allows other ions to enter the cell for signaling. When magnesium ions were elevated chronically, the amplitudes of I_{NMDA} near resting membrane potential were almost identical with the I_{NMDA} from synapses in the control group. However, the amplitudes of I_{NMDA} at positive membrane potentials were significantly larger. Based on this data, the authors suggest that a reduction of I_{NMDA} near resting membrane potential operates on a positive feedback mechanism where the loss of I_{NMDA} is restored to its original level by increasing NMDAR activity. Also, the removal of magnesium during strong depolarization exposes additional NMDAR, resulting in a selective increase in NMDAR activity. Therefore, the ultimate effects of elevated magnesium leads to increased NMDAR activity and the enhancement of NMDAR-dependent signaling associated with correlated synaptic activity.

In addition, to testing for enhancement of NMDAR-dependent signaling with extracellular magnesium ions alone, the authors compared the expression levels of NMDAR subunits in control and MgT-treated rats. Results showed that chronic treatment of MgT-treated rats selectively increased the expression of the NR2B subunit in hippocampus homogenate, while the expression of other subunits was unchanged. Slutsky *et al.* (2010) also found that increases in NR2B subunit expression were associated with changes in NMDAR-mediated synaptic transmission. They concluded therefore, that NR2B containing NMDAR were increased in the presence of MgT, resulting in enhancement of NMDAR signaling and synaptic plasticity.

5.2.1.2 *Magnesium L-threonate effects on lifespan in the mouse and Drosophila melanogaster*

In order to evaluate the the effects of long-term oral MgT on lifespan, investigators at Magceutics assessed its effect on lifespan in the Alzheimer disease (AD) mouse model and compared these effects to AD mice treated with the commonly prescribed AD drugs, Aricept® and Memantine®. The lifespan of AD model mice is shorter than that of normal mice. The study included a total of 182 AD mice and 65 normal untreated mice. Seventy-six 5-month-old AD mice were treated with MgT at 908 mg/kg/day until the end of life; twenty-two AD mice were treated with Namenda® and sixteen AD mice were treated with Aricept®. The investigators reported that long-term administration of MgT was found to prevent premature death in the AD mouse, whereas, the AD drugs Aricept® and Namenda® had little to no effect on preventing premature deaths in AD mice.

In studies conducted by Liu *et al.* (unpublished data), the effect of magnesium on lifespan was investigated using mice fed either a standard diet or a high-calorie diet. The investigators separated 180 female mice into 3 groups with 60 mice per group. One group was given a standard diet and the other two groups started with a standard diet and were switched to a high

calorie diet at 35 weeks of age. MgT was added to the drinking water at 604 mg/kg/day for the high calorie and magnesium group. The mice fed a high calorie diet had a significantly shorter lifespan than mice fed a standard diet. MgT increased the median lifespan of mice fed a high calorie diet by an average of 9% ($p < 0.05$) to the point where survival was not significantly different from that of non-obese standard diet controls ($p = 0.16$).

The investigators also evaluated the effects of MgT on the lifespan of *Drosophila melanogaster* using both a normal diet and a high-calorie diet. They found that MgT supplementation, at a level of 0.9 mg/ml (liquid food), led to an increase in median lifespan of 38% in *Drosophila melanogaster* fed a normal diet, as well as a 29% increase in those fed a high-calorie diet.

5.2.1.3 Evaluation of magnesium L-threonate effects on mouse body weight

Another study conducted by investigators at Magceutics evaluated the long-term effects of MgT on body weight in mice. Fifty-three-week-old mice were treated with 908 mg/kg/d MgT, the therapeutic dosage for memory enhancement in mice, for 24 weeks. No significant change in the body weight of MgT-treated mice was noted.

5.3 Safety of L-Threonate

5.3.1 Evaluation of the Relationship Between Threonic Acid and Ascorbic Acid Concentration in Rodents

Thomas and Hughes (1983) conducted acute and subchronic toxicity tests with L-threonate in guinea pigs to determine the potential for L-threonate to produce toxicity. Two groups (A and B, 10/group) of young male albino Dunkin Hartley guinea-pigs weighing approximately 300 grams received a 1% solution of ascorbic acid as drinking water for 3 days to produce tissue saturation, followed by a 10-day period of ascorbic acid depletion. This experimental design was used to eliminate differences between initial ascorbic acid status of all the animals. For another 4 days, treatment group B received 100 mg/kg/bw of threonic acid along with a daily oral dose of 5 mg/kg of ascorbic acid. Control group A only received an oral dose of 5 mg/kg of ascorbic acid and no threonic acid.

A second experiment conducted by the same investigators, evaluated two groups of 10 guinea pigs with the same study design as the previous experiment except the test was extended to 28 days. Lastly, a third experiment was conducted to evaluate the influence of dietary threonic acid on the survival of scorbutic guinea-pigs, and assess the nutritional significance of the threonic acid-induced depletion of ascorbic acid recorded in the first two experiments. Two groups (E and F) were used in this experiment; group E served as the control and did not receive any threonic acid. Group F was given a daily oral supplement of 100 mg threonic acid/kg

immediately after the 3-day ascorbic acid saturation period (no other ascorbic acid was given throughout the study for this group).

Results showed no changes in food intake, organ weights, or hematological or clinical chemistry parameters with treatment. Threonic acid did not interfere with gastrointestinal absorption of ascorbic acid. However, in both the 4-day and 28-day experiments there was evidence of a threonic acid-induced fall in the ascorbic acid concentration in certain organs (adrenals, testes and liver in the 4-day, liver and spleen in the 28-day). Threonic acid also significantly shortened the lifespan of ascorbic acid-deprived guinea pigs in group F, as compared to group E. The authors suggested that this reflects a specific threonic acid ascorbic acid relationship, and doesn't necessarily point to a general toxicity of threonic acid. By way of further explanation, the authors used the example that groups, such as institutionalized elderly, who may already have inadequate stores of ascorbic acid, may possibly have their body stores further reduced by intake of threonic acid. Thomas and Hughes (1983) acknowledged, however, that more research is needed in this area.

Another study conducted by Thomas and Hughes (1985) examined the potential for toxicity associated with administration of 1% dietary threonic acid (as calcium threonate) to male albino Wistar rats (10/group) for 120 days. The control group only received a casein starch based synthetic diet. The three groups were administered the test diets until necropsy. At necropsy, blood samples were collected for measurements of hemoglobin, packed cell volume, and plasma cholesterol. Cytochrome P-450 activity and weights of liver, spleen, adrenals and brain were recorded. No differences were found between the two groups in feed intakes, growth rates, hematological and clinical chemistry parameters, and absolute and relative organ weights, except for a ~9% reduction of liver weight in the calcium threonate group (Thomas and Hughes, 1985).

Thomas and Hughes (1985) also studied the effects of threonic acid on survival. Five-week old male and female mice (65/sex/group) received dietary threonic acid at doses equivalent to 0, 75, and 300 mg/kg/day until death; Group A served as the control group, Group B received 0.05% (75 mg/kg/day) calcium threonate, and Group C received 0.2% (300 mg/kg/day) calcium threonate. Survival was the only parameter on which data were presented. The mean life span in weeks was 63, 60, 61 for males, and 68, 66 and 71 for females, in the control, low, and high dose groups, respectively. On this basis, the authors concluded that calcium threonate at doses of 75 and 300 mg/kg/day had no significant influence on the mean life span of the mice (Thomas and Hughes, 1985).

5.4 Safety of Calcium L-Threonate

In lieu of the absence of studies for magnesium L-threonate, below is a detailed discussion of the safety studies as presented by EFSA during their evaluation of the safety of calcium L-

threonate. Although the original, unpublished studies were not obtainable, the review by EFSA is published and available in the public domain.

5.4.1 Acute Toxicity

Calcium L-threonate was neither toxic nor lethal at 40 g/kg bw, administered *via* oral gavage as two doses of 20 g/kg bw, six hours apart, to 10 male and female Kunming mice by oral gavage apart (Gao *et al.* 1997a).

Likewise, calcium L-threonate was not toxic at 32 g/kg bw, administered *via* oral gavage as two doses of 16 g/kg bw, six hours apart, to 10 male and female Wistar rats (Gao *et al.* 1997a).

Based on results of the acute oral toxicity studies conducted by Gao *et al.* (1997a), EFSA reported that calcium L-threonate is of low toxicity, with no adverse effects observed at doses as high as 40 g/kg bw in mice or 32 g/kg bw in rats (EFSA, 2008a).

5.4.2 Subchronic Toxicity

Calcium L-threonate was administered by oral gavage to rats at doses of 0, 2, 4, 6 g/kg bw/day, six days per week, for 24 consecutive weeks (Gao *et al.* 1998). The number of animals was 15/sex in the control and high-dose groups, and 10 animals/sex in the low- and mid-dose groups. Feed and water were supplied *ad libitum*. After 12 weeks of treatment, 5 rats/sex from both the control and high-dose groups were euthanized. For the remaining animals, treatment was terminated after 24 weeks and 7 rats/sex/group were euthanized, while the remaining 3 rats/sex/group were observed for an additional 3 weeks (recovery phase). All animals were observed daily for any changes in clinical appearance, and weighed once a week during the first 12 weeks of treatment, and once every second week thereafter. Blood samples for hematology (red blood cell count, white blood cell count and classification, hemoglobin, platelet count and coagulation time) and clinical chemistry (urea, nitrogen, bilirubin, total protein, albumin, total cholesterol, blood sugar, alkaline phosphatase, glutamic oxalacetic transaminase, glutamate pyruvate transaminase, creatinine) investigations were collected after 12 weeks (the control and high dose groups, only), 24 weeks, and at the end of the recovery period.

No mortality was observed during the study. Decreased spontaneous motor activity and loose stools were noted on several occasions in some of the animals from the high-dose group. Body weights of the animals in the low and medium dose groups were comparable to that of the control group. In the high dose group, terminal body weight was not statistically significantly different compared to the controls, but the body weight of females was statistically significantly lower from week 4 to 22, and for the males from week 4 to 8. The only difference in the hematological parameters was a significantly ($p < 0.01$) shorter coagulation time in the high dose group males (134 sec. \pm 33) and females (164 sec. \pm 42) compared to the controls (males: 222

sec. \pm 33; females: 217 sec. \pm 36). No significant differences were recorded between the treated and control rats of both sexes in the blood chemistry parameters after 12 and 24 weeks and at the end of the recovery period. Gross examination revealed the presence of gas and yellow liquid in the intestines of animals of both sexes in the high-dose group. No abnormalities or histopathological changes were found in either sex of the low- and mid-dose groups. In the high-dose group a mild thyroid gland accretion was observed in males but this change was not observed after the recovery period. Gao *et al.* (1998) argued that the observed effects on coagulation time and the thyroid gland were due to high calcium intake. As concluded by EFSA (2008a), the NOAEL for calcium L-threonate for rats in this study was 4 g/kg bw/day.

Calcium L-threonate was administered orally to hybrid dogs at doses of 0, 1, 2, or 3 g/kg bw/day, six days per week, for 24 consecutive weeks (Zhao *et al.*, 1997). The number of animals was 2/sex in the control and high-dose groups, 2 males and 3 females in the low-dose group, and 3 males and 2 females in the mid-dose group. Daily observations included general appearance, psychomotility, appetite, feed and water intake, and appearance of urine and feces. Blood samples for hematology (red blood cell count, white blood cell count and classification, hemoglobin, platelet count and coagulation time) and clinical chemistry (alanine aminotransferase (AST), aspartate aminotransferase (ALT), total bilirubin, total protein, albumin, blood urea nitrogen, creatinine cholesterol, glucose) were collected prior to treatment, after 2, 4 and 6 months, and two weeks after the last administration (recovery phase). Electrocardiograms were taken before administration and after 3 and 6 months, and two weeks after the last administration (recovery phase). Two to three animals from each group were sacrificed at the end of the treatment period and the remaining animals were sacrificed two weeks after the last administration (recovery phase).

No mortalities were reported, and no differences compared to the controls were noted for the measured parameters or upon necropsy. The only histopathological finding attributable to the treatment was slight hyperplasia of the thyroid gland, which was found in the mid- and high-dose groups. In these animals, there was an apparent decrease or absence of gelatinous substance in follicles and cubical or columnar epithelial cells. Exfoliated cells were also found in some follicles. These effects were found to be reversible. The authors of the study argued that the effects on the thyroid gland at 2 and 3 g/kg bw dose levels were due to the high calcium intake. As concluded by EFSA (2008a), the NOAEL was 1 g calcium L-threonate/kg bw/day in dogs of this study.

5.4.3 Genotoxicity

The potential genotoxicity of calcium L-threonate was evaluated in an Ames test, an *in vitro* mammalian chromosome aberration in Chinese hamster cells, and an *in vivo* mouse bone marrow micronucleus assay.

The mutagenic potential of calcium L-threonate was evaluated in the Ames test using *S. typhimurium* strains TA 97, TA 98, TA 100, and TA 102, both in the presence and absence of metabolic activation (S9 mix) (Gao *et al.*, 1997b). Calcium L-threonate, at concentrations of 0, 10, 100, 1000, 2500, and 5000 µg/plate, was found to be non-mutagenic under the conditions of the assay.

In its opinion on calcium ascorbate with a content of threonate, the EFSA Panel has previously evaluated results of two other studies investigating the mutagenic potential of calcium L-threonate monohydrate in the Ames test. In these studies, calcium L-threonate monohydrate, at concentrations up to 10,000 µg/plate, was found to be non-mutagenic (EFSA, 2007).

In an *in vitro* chromosomal aberration assay using Chinese hamster cells, calcium L-threonate at concentrations up to 2.5 mg/mL, both in the absence and presence of an exogenous source of metabolic activation, demonstrated no genotoxic activity (Gao *et al.*, 1997c).

In an *in vivo* mouse bone marrow micronucleus assay, calcium L-threonate administered by oral gavage to groups of 6 male mice at doses of 0, 5, 10 or 20 mg/kg/bw did not induce any changes in the frequency of micronucleated polychromatic erythrocytes. Therefore, calcium L-threonate was considered nongenotoxic in the *in vivo* micronucleus assay (Gao *et al.*, 1997d).

5.4.4 Reproductive and Developmental Toxicity

In an unpublished study conducted by Wu *et al.* (1997a), calcium L-threonate was administered by gavage at doses of 0, 2, 4 or 6 g/kg bw/day to male and female Kunming mice (20 animals/sex/group). Males were dosed for 60 days and females were dosed 2 weeks prior to mating (one-to-one); treatment continued for 20 pregnant F0 females on days 6 to 15 of gestation. Body weights of the dams were recorded on days 0, 3, 7, 10, 13, 16, and 20. The dams were sacrificed on day 21 of gestation. Pregnancy rate, number of living fetuses, number of dead fetuses, weight of the living fetuses, implantation numbers and the number of resorptive fetuses were recorded. Viable fetuses were examined for external abnormalities. Half of the fetuses were sectioned for examination of visceral alterations and the remaining were processed and examined for skeletal abnormalities.

The authors reported that calcium L-threonate at doses up to 6 g/kg bw/day had no effect on body weight of the dams or on reproductive performance of the parental animals. The number of implantations, resorptions, and dead and viable fetuses, as well as body weights of viable fetuses in the test groups were comparable to those in the control group. According to the report of the EFSA Scientific Panel on Food Additives and Nutrient Sources Added to Food (ANS), Wu *et al.* (1997a) also indicated that no external, visceral or skeletal malformations were seen in the fetuses, however, these results were not presented in the study report (EFSA, 2008a). On this

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basis, the authors of the study concluded that calcium L-threonate was neither a developmental toxicant nor teratogenic under conditions of this assay.

In another study conducted by Wu *et al.* (1997b), calcium L-threonate was administered by gavage to groups of 20 pregnant Kunming mice at doses of 0, 2, 4, and 6 g/kg bw/day on days 6 through 15 of gestation. Body weights of dams were recorded on days 0, 3, 7, 10, 13, 16, and 20; dams were sacrificed on day 21 of gestation. The number of implantations, resorptions, dead and viable fetuses, the weight of viable fetuses, and external abnormalities were recorded. Half of the fetuses were sectioned for examination of visceral alterations. The remaining fetuses were examined for skeletal abnormalities.

The authors reported that treatment with calcium L-threonate at doses up to 6 g/kg bw/day did not affect the clinical appearance or body weight of the dams. The number of implantations, resorptions, and dead and viable fetuses, as well as body weights of viable fetuses in the test groups was comparable to those in the control group. According to the report of the EFSA Scientific Panel on Food Additives and Nutrient Sources Added to Food (ANS), Wu *et al.* (1997b) (EFSA, 2008a) also reported that there were no external abnormalities, visceral alterations or skeletal abnormalities attributable to the treatment, however, the results were not presented in the study report. On this basis, the authors concluded that calcium L-threonate was not teratogenic under conditions of this assay.

In an effort to examine the potential toxicity of calcium L-threonate during the perinatal period, Wu *et al.* (1997c) administered calcium L-threonate (0, 2, 4, and 6 g/kg bw/day) *via* oral gavage, to 20 pregnant Kunming mice from day 15 of gestation to the end of weaning (day 21 post-delivery). Body weights of the dams were recorded on days 0, 3, 7, 10, 13, 16, and 20 of gestation. Duration of gestation, the number of live and dead pups, external abnormalities, and indices of physiological and behavioral development were also noted. Females on this study were allowed to deliver and raise their young. Sixty-day-old offspring (F1 generation) were mated one-to-one within the same treatment group to assess their reproductive performance. Observations for the F1 generation included duration of gestation, the number of live and dead pups, external abnormalities, and indices of physiological and behavioral development.

According to the authors, calcium L-threonate at doses up to 6 g/kg bw/day had no effect on the length of gestation, litter size, number of live or dead fetuses, survival rate, developmental parameters, behavior or reproductive performance of the F1 generation. Behavioral studies in the form of a net-climbing test showed no significant difference between each of the test groups and the control group. A coordination test using the rotating rod method also indicated that there was no significant difference between the groups. Furthermore, calcium L-threonate had no effect on meberal-induced sleeping time in animals of the F1 generation.

As concluded by the EFSA (2008a), results from the aforementioned studies conducted by Wu *et al.* (1997a,b,c) indicated that calcium L-threonate had no adverse effect on fertility and the developing fetus.

6.0 ACCEPTABLE DAILY INTAKE

The ADI is based on the results of the previously discussed reproductive developmental toxicity study of calcium L-threonate that concluded that the NOAEL was 6 g/kg bw/day in mice⁴. As discussed in detail in Section 5.1, the Expert Panel acknowledges the 24-week oral toxicity study of calcium L-threonate in dogs resulted in a NOAEL of 1-g/kg bw, however adverse effects in the thyroid gland observed in the higher dose test groups were attributed to high calcium intake. Similarly, adverse effects in the thyroid gland occurred at the highest dose group in the subchronic oral toxicity study in rats. This was also attributed to high calcium intake. In accordance with 21 CFR 170.22, a safety factor of 100 should be utilized when extrapolating the safe consumption levels of food additives from the NOAEL of animal toxicity models. Therefore, based on the NOAEL was 6 g/kg bw/day, the average 70 kg person in the United States can be expected to safely consume 3,658 mg of L-threonate ($5,226 \text{ mg/kg bw/day} \div 100 \times 70 \text{ kg}$) without exceeding levels of L-threonate exposure that are generally recognized as safe by scientific procedures.

As discussed in Section 3.8, batch records generated from recent analyses of Magceutics' magnesium L-threonate indicate that the product is comprised of approximately 88.8% L-threonate by weight. In addition, as shown in the preceding paragraph, the safe level of L-threonate intake is estimated to be 3,658 mg/day. Thus, in order to calculate the amount of magnesium L-threonate consumption that would afford comparable L-threonate exposure, the safe level of L-threonate (3,658 mg per day) can be multiplied by a factor to account for the threonate content of MgT. This calculation results in 4,119 mg magnesium L-threonate per day for the average 70 kg person.

Batch records also indicate that magnesium L-threonate is comprised of an average of 7.7% magnesium (77 mg/g). Therefore, a consumer exposed to 4,119 mg magnesium L-threonate per day, would be exposed to 317 mg of supplemental magnesium, below the upper tolerable limit of 350 mg per day for males and females that are nine years old or older, including pregnant and lactating females, that has been set for supplemental magnesium in 2004 by the IOM. Therefore, it is the conclusion of Magceutics's, that magnesium L-threonate is generally recognized as safe, when manufactured in accordance with GMPs, as specified in 21 CFR 110—when used as a nutritive supplement to the categories of food previously discussed in this

⁴ Inadvertently identified as a dog study in the Expert Panel Report (Appendix 1, page 14).

document, at a level that does not exceed the ADI of magnesium L-threonate, 4,119 mg/person/day.

7.0 SUMMARY AND CONCLUSIONS

The purpose of this document was to establish that Magceutics, Inc.'s MgT product, to be marketed under the name Magtein™, is GRAS when used as a nutritive supplement in a variety of food products such as alcoholic beverages, baked goods and baking mixes, beverages and beverage bases, breakfast cereals, chewing gum, grain products and pastas, hard candy, processed fruits and fruit juices, processed vegetables and vegetable juices, snack foods, soft candy, and soups and soup mixes. Magtein™ will be used in food at levels resulting in an estimated 90th percentile all user intake of 40 mg/kg bw/day of magnesium L-threonate hydrate providing 3.0 mg/kg bw/day magnesium (equivalent to 2,371 mg/person/day of magnesium L-threonate hydrate and 183 mg/person/day of magnesium) from all proposed food-uses. The anticipated consumer intake is well below the calculated ADI calculated by the Expert Panel secured by Magceutics of 4,119 mg magnesium L-threonate per day for the average 70- kg person, and the upper tolerable limit of 350 mg per day that has been set for supplemental magnesium by the IOM.

Magtein™ is proposed as an alternative to other magnesium compounds already added to food, it is not intended to be added to foods in addition to other sources of magnesium.

The following factors identified constitute the basis for the GRAS determination:

- Several salts of magnesium are considered GRAS as a direct additive to foods with no limits other than GMP; these magnesium salts include, carbonate, chloride, hydroxide, oxide, phosphate and stearate (21 CFR 184.1).
- Supplemental magnesium has an established upper tolerable limit of 350 mg per day for males and females that are nine years old or older, including pregnant and lactating females, as declared by the IOM.
- The anticipated 90th percentile consumer intake of 2,371 mg/person/day of magnesium L-threonate hydrate (183 mg/person/day of magnesium) is well below the calculated ADI of 4,119 mg magnesium L-threonate per day for the average 70 kg person, and the upper tolerable limit of 350 mg per day that has been set for supplemental magnesium by the IOM.
- L-Threonic acid is a metabolite of ascorbic acid and occurs endogenously in the human body.

- EFSA conducted a comprehensive and critical review of the safety of another salt conjugate of L-threonate, calcium L-threonate. This review established the safety of L-threonate salt. The decision was supported by the following studies: acute toxicity, subchronic and chronic toxicity, genotoxicity, as well as reproductive and developmental toxicity.
- The safety of supplemental magnesium is supported by a vast history of safe consumption by man.
- Demonstrated quality assurance in manufacturing.

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Appendix 1

Expert Panel Report

The Generally Recognized as Safe (GRAS) Status of Magnesium L-Threonate

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AIBMR Life Sciences, Inc.
Natural and Medicinal Products Research

EXPERT PANEL REPORT

The Generally Recognized as Safe (GRAS) Status of Magnesium-L-Threonate

Prepared on behalf of:

Magceutics, Inc.

May 25, 2011

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The effects of long-term magnesium administration have been established through several studies and safety evaluations. In published clinical trials, doses ranging from 300–1,000 mg/day have been consumed with the duration of dosing as long as five years. In one study involving diabetics, 640 mg of magnesium was given daily for 3 months without observing any significant side effects [9]. In another study, 300 mg/day was given to patients with neuropathy for five years without reporting any significant side effects [10].

B. Threonate Salts

In addition to magnesium L-threonate, other mineral conjugates of threonate exist; for example, ferrous L-threonate has been used as a beneficial treatment for iron-deficiency anemia. Calcium L-threonate has been developed for use in calcium supplementation and osteoporosis treatment. Ester-C® is a calcium ascorbate product that contains a small amount of threonate (< 3%) which may lead to an increased vitamin C absorption in humans [11, 12]. A dietary supplement named BioCalth formulated with Calcium Threonate has been on the market since 2001. The dosage of Calcium Threonate is 2325 mg a day providing 300 mg calcium daily. There are no adverse side effects reported or published. *In vitro* incubation with calcium L-threonate leads to a dose-dependant increase in the uptake of ascorbic acid in human T lymphoma cells. Based on an evaluation by EFSA, as discussed below, L-threonate is an endogenous compound in the body; however, data on the dietary exposure from the compound are not available. [4]. Appendix 1

IV. Manufacturing and Production

A. Overview

Magnesium L-threonate is a white powder that is soluble in water at greater than 100 mg/mL. It has a molecular weight of 294.5 g/mol (anhydrous) and 312.51 g/mol (monohydrate).

Magnesium L-threonate is prepared by reacting vitamin C, hydrogen peroxide and calcium carbonate to yield calcium-L-threonate. A side product of this initial reaction is water-insoluble calcium oxalate. Calcium-L-threonate is combined with oxalic acid and then magnesium oxide and ethanol to yield magnesium-L-threonate. Water and ethanol are the two solvents used in the manufacturing. Elemental analytical results show that magnesium L-threonate prepared using the current procedure is typically associated with one molecule of water. For a more detailed protocol (confidential) for production of magnesium L-threonate. Appendix 2.

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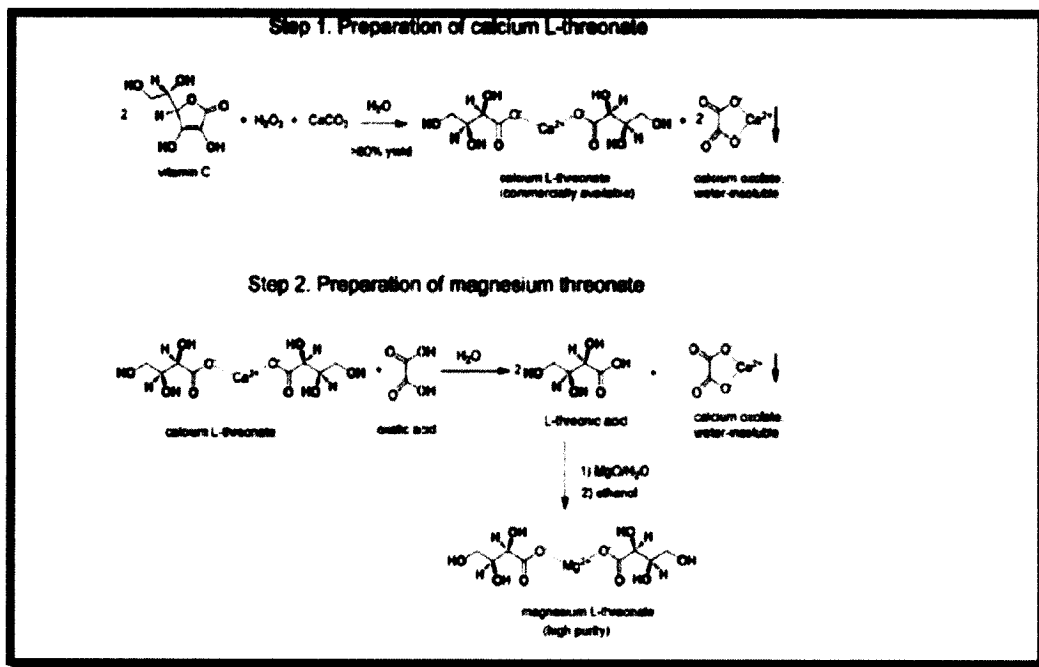


Figure 1: Synthesis of Magnesium-L-Threonate

B. Raw Materials

Raw materials used in the manufacturing of magnesium L-threonate include vitamin C, hydrogen peroxide, calcium carbonate, magnesium oxide, oxalic acid (dehydrate) and calcium-L-threonate (China). The two solvents used are ethanol and deionized water. **Appendix 2.**

C. Quality Management

The product is manufactured to ensure that each lot completely meets the following specifications, prior to leaving the facility: elemental analysis (Titration, ICP), heavy metals (ICP-MS), solubility, Assay (Titration), and identity testing using FTNIR. **Appendix 3.**

E. Batch Analysis

Batch analysis of Lot# 20101001 of magnesium L-threonate is presented in **Table 2**. The product met all specifications completely. Note: the batch was comprised of 87.4% by weight L-threonate and 7.6% by weight magnesium. **Appendix 3.**

Table 2. Non-sequential batch analyses
BEST ORIGINAL COPY

Identification	
Color and Form	
Solubility	
Assay	
Loss on Drying	
Magnesium	
L-Threonate	
Mercury	
Lead	
Cadmium	
Arsenic	
Total plate count	
Yeast and mold	
<i>E. coli</i>	

D. Residual Solvent Analysis

Lot #20101001 of magnesium L-threonate was analyzed for the presence of residual solvents using GC-MS by an independent laboratory. The lot was free of the following solvents: methanol, acetone, 1-butanol, ethylacetate, benzene, toluene, isopropanol, chloroform, 1,1,2-trichloroethane, hexane, pentane, butyl acetate, ethanol, 1,2-dichloroethane, cyclohexane, heptane, methylethylketone (MEK) and methyl-tert-butylether (MTBE). Appendix 3.

V. Animal Studies

A recent study done by Slutsky et al., investigated the effects of magnesium L-threonate on the learning ability, working memory and short- and long-term memory in young and old rats. In their study, the investigators tested a number of forms of magnesium to determine which was the most bioavailable. Magnesium from magnesium L-threonate was found to be superior in bioavailability compared to magnesium chloride, magnesium gluconate and magnesium citrate. Additionally, they fed young and old rats 604 mg/kg/day of



magnesium L-threonate (50 mg/kg/day elemental magnesium) or standard feed containing 0.15% elemental magnesium for 60 to 72 days (young and old respectfully). The investigators reported that subacute treatment (1 month) with magnesium L-threonate at this dose did not influence water and food intake, body weight and overall mobility.

A number of animal trials were performed to measure the effect of magnesium L-threonate on cognitive outcomes including the effect on brain magnesium levels and its relationship to cognition. The investigators found that elevation of brain magnesium led to significant enhancement of spatial and associative memory in both young and old rats. This study may also shed light on a potential mechanism of action for magnesium L-threonate related to cognitive functions. In the brain, magnesium is responsible for modulating the voltage-dependent block of NMDA receptors (NMDAR), controlling their opening during coincidence detection that is critical for synaptic plasticity. The investigators hypothesize that magnesium is a positive regulator of synaptic plasticity and that increasing concentrations within the physiological range leads to permanent enhancement of synaptic plasticity in networks of hippocampal neurons. In their *in vitro* findings using magnesium L-threonate, NR2B-containing NMDAR were increased resulting in enhancement of NMDAR signaling and plasticity [3].

L-threonate has been studied in guinea pigs. Thomas and Hughes gave young male albino guinea-pigs (10 per group) a 1% solution of ascorbic acid as drinking water for 3 days to produce tissue saturation, followed by a 10-day period of ascorbic acid depletion (performed to eliminate differences between initial ascorbic acid status of all the animals) [6]. They then performed several studies. For another four days, group B received 100 mg of threonic acid per kg body weight along with a daily oral dose of 5 mg ascorbic acid/kg. Threonic acid was not given to group A. Groups C and D were treated in the same way except that the test was extended to 28 days. Lastly, group F was given a daily dose of 100 mg threonic acid/kg immediately after the 3-day ascorbic acid saturation period (no other ascorbic acid was given throughout the study for this group). Group E served as the control and did not receive the threonic acid.

Results showed no changes in food intake, organ weights or hematological/clinical chemistry parameters with treatment. Threonic acid did not interfere with gastrointestinal absorption of ascorbic acid. However, in both the 4-day and 28-day experiments there was evidence of a threonic acid-induced fall in the ascorbic acid concentration in certain organs (adrenals, testes and liver in the 4-day, liver and spleen in the 28-day). Threonic acid also significantly shortened the lifespan of ascorbic acid-deprived guinea pigs in-group F ($p < 0.01$), as compared to group E. It was suggested that this is a specific threonic acid-ascorbic acid relationship, and doesn't necessarily point to a general toxicity of threonic acid. As a way of suggesting what this might mean, the authors used the example that groups such as institutionalized elderly who may already have inadequate stores of ascorbic acid, could possibly have their body stores further



reduced by intake of threonic acid [6], although more research would be needed to determine this.

Another study by the same authors [13] looked at effects of the administration of 1% dietary threonic acid (as calcium threonate) to male rats (10/group) for 120 days. They also studied the effects of administering dietary threonic acid to male and female mice. (65 male and 65 females per group Group A served as the control group, Group B received 0.05% calcium threonate, and Group C received 0.2% calcium threonate. The three groups were administered the test diets until death occurred.

In both experiments there were no significant effects on food consumption, growth rate, organ weights (except a significant reduction ($p < 0.05$) in relative liver weight in the test group of the rat study), biochemical parameters (including hemoglobin, PVC (packed cell volume %), cholesterol and cytochrome P-450) and survival times, as compared to controls [11]. The investigators state in the introduction "the average consumer may ingest annually some 2–10 g of ascorbic acid metabolites from additive sources".

In studies done by Liu et al (unpublished data), the effect of magnesium on lifespan was investigated using mice fed a standard diet and ones that were fed a high-calorie diet. The investigators separated 180 female mice into 3 groups with 60 mice per group. One group was given a standard diet and the other two groups started with a standard diet and were switched to a high calorie diet at 35 weeks of age. Magnesium L-threonate was added to the drinking water at 50 mg/kg/day (from 606 mg MgT/kg/d) for the high calorie and magnesium group. The mice fed a high calorie diet had a significantly shorter lifespan than mice fed a standard diet. Magnesium L-threonate increased the median lifespan of mice fed a high calorie diet by an average of 9% ($p < 0.05$) to the point where survival was not significantly different from that of non-obese standard diet controls ($p = 0.16$).

The investigators also evaluated the effects of magnesium L-threonate on the lifespan of *Drosophila melanogaster* using both a normal diet and a high-calorie diet. They found that magnesium L-threonate supplement 0.9 mg/ml (liquid food) led to an increase in median lifespan of 38% in those fed a normal diet as well as a 29% increase in those fed a high-calorie diet.

The effects of magnesium L-threonate on body weight were evaluated in mice. Body weight is an important parameter that reflects general health status. The effects of long-term magnesium L-threonate administration on body weight were investigated using 53-week-old mice. These mice were treated with 75 mg/kg/d magnesium L-threonate (909 mg MgT/kg/d) for 24 weeks. The body weight of the mice did not change significantly. Appendix 4.

Investigators at Magceutics, Inc. assessed lifespan changes over a course of 450 days in an Alzheimer disease (AD) mouse model compared to wild type mice, and was compared to effects of administration of several commonly prescribed AD drugs. The lifespan of AD model mice is shorter than that of normal mice ($p < 0.05$). AD male mice were treated with magnesium L-threonate at a dosage of 75



mg Mg/kg/day (from 909 mg Mg/kg/d) at 5 months old until the end of life (AD mice n = 37; AD mice + Namenda® n = 22; AD mice + Aricept® n = 16; AD mice + MgT n = 25; wild type mice n = 25). Magnesium L-threonate normalized the lifespan of this animal model, an effect that neither of the two leading FDA approved drugs for AD, Aricept® (donepezil) and Namenda® (memantine HCl), were able to do. These two drugs had a no effect on preventing the premature deaths of AD model mice (p=0.66, AD+Aricept® versus AD; p = 0.76, Namenda® versus AD). Appendix 4.

VI. Regulatory and Past Safety Considerations

A. Magnesium

Several salts of magnesium are considered GRAS as a direct additive to foods with no limits other than GMP, in accordance with 21 CFR 184.1. These magnesium salts include: carbonate, chloride, hydroxide, oxide, phosphate and stearate. Additionally, the Daily Reference Value (DRV) for magnesium, as defined by 21 CFR 101.9(c)(9), is 400 mg per day.

Intake of magnesium from food is known to be lower than recommended in the U.S. population. [14, 15] Older adults are especially prone to magnesium deficiency, and deficiency has been associated with a number of disorders, as it plays an important role in more than 300 enzymatic reactions in the body.[16, 17] An upper tolerable limit of 350 mg per day for males and females that are nine years old or older, including pregnant and lactating women, has been set for magnesium by the Food and Nutrition Board of the Institute of Medicine (IOM). This upper limit represents supplemental intake, and not intake from food nor water. [18]

B. L-Threonate

The European Food Safety Authority (EFSA) conducted a comprehensive and critical review of the safety of another salt of L-threonate, calcium L-threonate as a food additive and nutrient supplement. The committee ruled that calcium L-threonate was safe at the proposed use level indicated by the petitioner that is estimated to amount to 1350–2700 mg of L-threonate per person per day, corresponding to 22.5–45 mg/kg b.w/day for a 60 kg person. A large battery of toxicology studies on calcium-L-threonate supported EFSA's decision. These included studies on acute toxicity, subchronic and chronic toxicity, genotoxicity, mutagenicity, as well as reproductive and developmental toxicity. These are discussed in detail in the following section. Appendix 4.

VII. Safety Studies of Calcium L-threonate

In lieu of the absence of studies for magnesium-L-threonate, below is the detailed discussion of the safety studies presented by EFSA during the evaluation of the safety of calcium L-threonate. The original, unpublished studies were not



obtainable; however, the review by EFSA is published and available in the public domain.

A. Bacterial Reverse Mutation Assay (Ames)

The mutagenic potential of calcium L-threonate was tested in the Ames test with and without metabolic activation (S9 mix) using *S. typhimurium* strains TA 97, TA 98, TA 100, and TA 102. Calcium L-threonate was tested at concentrations of 0, 10, 100, 1000, 2500, and 5000 µg/plate. Calcium L-threonate was found to be not mutagenic under the conditions of the assay. Appendix 4.

In its opinion on calcium ascorbate with a content of threonate, the EFSA Panel has previously evaluated results of two other studies of the mutagenic potential of calcium L-threonate monohydrate in the Ames test. In these studies, concentrations of up to 10,000 µg/plate were used. Calcium L-threonate monohydrate was found to be not mutagenic under condition of the tests [8].

B. Micronucleus Study

In an *in vivo* mouse bone marrow micronucleus assay, calcium L-threonate administered by oral gavage to groups of 6 male mice at doses of 0, 5, 10 or 20 mg/kg/bs did not induce any changes in the frequency of micronucleated polychromatic erythrocytes. Appendix 4.

C. Chromosomal Aberration Study

In an *in vitro* chromosomal aberration assay using Chinese hamster cells, calcium L-threonate at concentrations up to 2.5 mg/mL, both in the absence and in the presence of an exogenous source of metabolic activation, demonstrated no genotoxic activity. Appendix 4.

D. Acute Oral Toxicity Studies

Calcium L-threonate was not toxic or lethal when administered orally by gavage at a daily dose of 40 g/kg bw given as two doses of 20 g/kg bw six hours apart to 10 male and 10 female Kunming mice.. In another study, calcium L-threonate was not toxic when administered orally by gavage at a daily dose of 32 g/kg bw given as two doses of 16 g/kg bw six hours apart to 10 male and 10 female Wistar rats observed for 10 days. Appendix 4.

E. Subchronic and Chronic Oral Toxicity

Calcium L-threonate was administered orally by gavage to rats at doses of 0, 2, 4, 6-g/kg bw/day, six days per week, for 24 consecutive weeks. The number of animals was 15/sex in the control and high-dose groups, and 10 animals/sex in the low- and mid-dose groups. Feed and water were supplied *ad libitum*. After 12 weeks of treatment, 5 rats/sex from both the control and high-dose groups were euthanized. For the remaining animals, treatment was terminated after 24 weeks and 7 rats/sex/group were euthanized, while the remaining 3 rats/sex/group were observed for the following 3 weeks (recovery phase). All animals were



observed daily for any changes in clinical appearance, weighed once a week during the first 12 weeks of treatment and once every second week thereafter. Blood samples for hematology (red blood cell count, white blood cell count and classification, hemoglobin, platelet count and coagulation time) and clinical chemistry (urea, nitrogen, bilirubin, total protein, albumin, total cholesterol, blood sugar, alkaline phosphatase, glutamic oxalacetic transaminase, glutamate pyruvate transaminase, creatinine) investigations were collected after 12 weeks (the control and high dose groups, only), 24 weeks and at the end of the recovery period. No mortality was observed during the study. Decreased spontaneous motor activity and loose stools were noted on several occasions in some of the animals from the high-dose group. Body weights of the animals in the low and medium dose groups were comparable to that of the control group. In the high-dose group, terminal body weight was not statistically significantly different compared to the controls, but the body weight of females was statistically significantly lower from week 4 to 22, and for the males from week 4 to 8. The only difference in the hematological parameters was a significantly ($p < 0.01$) shorter coagulation time in the high dose group males (134 sec. \pm 33) and females (164 sec. \pm 42) compared to the controls (males: 222 sec. \pm 33; females: 217 sec. \pm 36). No significant differences were recorded between the treated and control rats of both sexes in the blood chemistry parameters after 12 and 24 weeks and at the end of the recovery period. Gross examination revealed the presence of gas and yellow liquid in the intestines of animals of either sex in the high-dose group. No abnormalities or histopathological changes were found in the low- and mid-dose groups of both sexes. In the high-dose group a mild thyroid gland accretion was observed in males but this change was not observed after the recovery period. The authors of the study argued that the effects on the coagulation time and the thyroid gland were due to high calcium intake. It was concluded that the NOAEL was 4-g/kg bw/day in rats (516 mg calcium/kg bw/day and 3,484 mg L-threonate/kg bw/day). Appendix 4.

Calcium L-threonate was administered orally to hybrid dogs at doses of 0, 1, 2, or 3-g/kg bw/day, six days per week, for 24 consecutive weeks. The number of animals was 2/sex in the control and high-dose groups, 2 males and 3 females in the low-dose group, and 3 males and 2 females in the mid-dose group. Daily observations included general appearance, psychomotility, appetite, feed and water intake, appearance of urine and feces. Blood samples for hematology (red blood cell count, white blood cell count and classification, hemoglobin, platelet count and coagulation time) and clinical chemistry (alanine aminotransferase (AST), aspartate aminotransferase (ALT), total bilirubin, total protein, albumin, blood urea nitrogen, creatinine cholesterol, glucose) were collected prior to treatment, after 2, 4 and 6 months, and two weeks after the last administration (recovery phase). Electrocardiograms were taken before administration and after 3 and 6 months, and two weeks after the last administration (recovery phase). Two to three animals from each group were sacrificed at the end of the treatment period and the remaining animals were sacrificed two weeks after the last administration (recovery phase). No mortalities were reported, and no differences compared to the controls were noted for the measured parameters or



upon necropsy. The only histopathological finding attributable to the treatment was slight hyperplasia of the thyroid gland, which was found in the mid and high-dose groups. In these animals, there was an apparent decrease or absence of gelatinous substance in follicles and cubical or columnar epithelial cells. Exfoliated cells were also found in some follicles. These effects were found to be reversible. The authors of the study argued that the effects on the thyroid gland at 2 and 3 g/kg bw dose levels were due to the high calcium intake. It was concluded that the NOAEL was 1 g calcium L-threonate/kg bw/day in dogs (129 mg calcium/kg bw/day and 871 mg L-threonate/kg bw/day). Appendix 4.

F. Reproductive and Developmental Toxicity

Calcium L-threonate was administered by gavage at doses of 0, 2, 4 or 6-g/kg bw/day to groups of 20 Kunming male mice for 60 days, and to groups of 20 female Kunming mice for 14 days prior to mating (one-to-one). The treatment continued for the pregnant females through the period of organogenesis. The dams were sacrificed on day 21 of gestation. Pregnancy rate, number of living fetuses, number of dead fetuses, weight of the living fetuses, implantation numbers and the number of resorptive fetuses were recorded. Viable fetuses were examined for external abnormalities. Half of the fetuses were sectioned for examination of visceral alterations and the remaining were processed and examined for skeletal abnormalities.

Calcium L-threonate at doses up to 6 g/kg bw/day had no effect on body weight or on reproductive performance of the parental animals. The authors of the study reported that no external, visceral or skeletal malformations were seen in the fetuses, but these results were not presented in the report.

Calcium L-threonate was administered orally by gavage to groups of 20 pregnant Kunming mice at doses of 0, 2, 4, and 6-g/kg bw/day on days 6-15 of gestation. Body weights of the dams were recorded on days 0, 3, 7, 10, 13, 16, and 20. The dams were sacrificed on day 21 of gestation. The number of implantations, resorptions, dead and viable fetuses, the weight of viable fetuses, and external abnormalities were recorded. Half of the fetuses were sectioned for examination of visceral alterations. Sections of the remaining fetuses were stained and examined for skeletal abnormalities.

Treatment with calcium L-threonate at doses up to 6 g/kg bw/day did not affect the clinical appearance or body weight of the dams. The number of implantations, resorptions, and dead and viable fetuses, as well as body weights of viable fetuses in the test groups were comparable to those in the control group. The authors of the study reported that there were no abnormalities, no visceral alterations or skeletal abnormalities attributable to the treatment, but the results were not presented in the report. The authors of the study concluded that calcium L-threonate was not teratogenic or a developmental toxicant under conditions of this assay.

Calcium L-threonate was administered orally by gavage to groups of 20 pregnant Kunming mice at doses of 0, 2, 4, and 6-g/kg bw/day from day 15 of



gestation to the end of weaning (day 21 post delivery). Body weights of the dams were recorded on days 0, 3, 7, 10, 13, 16, and 20 of gestation. Other observations included duration of gestation, the number of live and dead pups, external abnormalities, and indices of physiological and behavioral development. The females were allowed to deliver and raise their young. Sixty-day-old offspring (F1 generation) were mated one-to-one within the same treatment group to assess their reproductive performance.

Calcium L-threonate up to 6 g/kg bw/day had no effect on the length of gestation, litter size, number of live or dead fetuses, survival rate, developmental parameters, behavior or reproductive performance of the F1 generation. Behavioral studies in the form of a net-climbing test showed no significant difference between each of the test groups and the control group. A coordination test using the rotating rod method also indicated that there was no significant difference between the groups using this test method. Furthermore, calcium L-threonate had no effect on meberal-induced sleeping time in the animals of the F1 generation.

The results from these studies indicated that calcium L-threonate had no adverse effect on fertility and the developing fetus or young. **Appendix 4.**

II. Intended Use

For the purpose of this GRAS self-affirmation, Magceutics' magnesium-L-threonate, manufactured in accordance with Good Manufacturing Practice (GMP) as specified in 21 CFR 110, is intended to be used as a nutritive supplement, at an addition to the categories of food discussed below that does not exceed the levels of addition defined by this document. It is the responsibility of the manufacturer to consider the estimated dietary exposure (EDI) of the ingredient from all combined foodstuffs to ensure that the addition level in each category of foods does not exceed the boundaries discussed within this document. Magceutics' magnesium L-threonate may be added to the following category of foods as defined in 21 CFR §170.3(n):

- (1) Baked goods and baking mixes, including all ready-to-eat and ready-to-bake products, flours, and mixes requiring preparation before serving.*
- (3) Beverages and beverage bases, nonalcoholic, including only special or spiced teas, soft drinks, coffee substitutes, and fruit and vegetable flavored gelatin drinks*
- 4) Breakfast cereals, including ready-to-eat and instant and regular hot cereals.*
- (30) Milk, whole and skim, including only whole, lowfat, and skim fluid milks.*
- (31) Milk products, including flavored milks and milk drinks, dry milks, toppings, snack dips, spreads, weight control milk beverages, and other milk origin products.*
- (37) Snack foods, including chips, pretzels, and other novelty snacks.*



IX. Acceptable Daily Intake

The acceptable daily intake is based on the results of the previously discussed reproductive developmental toxicity study of calcium L-threonate that concluded that the NOAEL was 6-g/kg bw/day in dogs (774 mg calcium/kg bw/day and 5,226 mg L-threonate/kg bw/day). The expert panel acknowledges the 24-week oral toxicity study of calcium L-threonate in dogs resulted in a NOAEL of 1-g/kg bw, however adverse events in higher dose test groups were attributed to the effects of high calcium intake to the thyroid. Similarly, adverse events that occurred in the highest dose group in the subchronic oral toxicity study in rats were attributed to calcium intake. In accordance with 21 CFR 170.22, a safety factor of 100 should be utilized when extrapolating the safe consumption levels of food additives from the NOAEL of animal toxicity models. Therefore, the average 70 kg person in the United States can be expected to safely consume 3,658 mg of L-threonate (5,226 mg/kg bw/day \div 100 \cdot 70 kg) without exceeding levels of L-threonate exposure that are generally recognized as safe by scientific procedures.

As previously discussed, batch records of Magceutics' magnesium L-threonate indicate that the product is comprised of 87.4% L-threonate by weight. Therefore, it is prudent to multiple the safe consumption level of L-threonate per day (3,658 mg) by 1.126 to calculate the amount of magnesium L-threonate consumption that would afford comparable L-threonate exposure. This calculation results in 4,119 mg magnesium L-threonate per day for the average 70 kg person.

Batch records also indicate that magnesium L-threonate is comprised of 8.4% magnesium (84 mg/g). Therefore, a consumer exposed to 4,119 mg magnesium L-threonate per day, would be exposed to 346 mg of supplemental magnesium, below the upper tolerable limit of 350 mg per day for males and females that are nine years old or older, including pregnant and lactating females, that has been set for supplemental magnesium by the Food and Nutrition Board of the Institute of Medicine (IOM). [18] Therefore, it is the conclusion of the expert panel, that Magceutics's magnesium L-threonate is generally recognized as safe, when manufactured in accordance with Good Manufacturing Practices (GMPs), as specified in 21 CFR 110—when used as a nutritive supplement to the categories of food previously discussed in this document, at a level that does not exceed the ADI of magnesium L-threonate, 4,119 mg/person/day.



X. Conclusion

The Expert Panel has independently and collectively critically evaluated this safety assessment of Magceutics' magnesium-L-threonate, and unanimously conclude that the intended use of magnesium L-threonate as a nutritive supplement, produced in accordance with Good Manufacturing Practice, and meeting the specifications presented in the document that is the basis for the GRAS determination, is generally recognized as safe. The Expert Panel further concludes that the intended use is GRAS based on scientific procedures. The Expert Panel believes that other experts qualified by training and experience to evaluate the safety of food ingredients would concur with this GRAS conclusion.

Panel Members:

(b) (6)

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Pages 000061-000064 of Curriculum Vitae removed in accordance with the Privacy Act of 1974.



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Appendix 2

Magnesium L-Threonate Specifications, Batch Analysis Data, and Residual Solvent Analysis

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Product Specifications

www.aidp.com

AIDP

19535 East Walnut Drive South, City of Industry, CA 91748
toll free **866.262.6699** direct **626.964.6910** fax **626.964.6739**
techsupport@aidp.com

MgT™

Product Name: MgT™
Product Code: T0700
CAS #: 778571-57-6
Molecular Formula: C₈H₁₄MgO₁₀
Molecular Weight: 294.50
Batch #: (b) (4)
Manufacture Date: October 22, 2010
Expiration Date: October 21, 2012
Country of origin: China

<u>Item</u>	<u>Specification</u>	<u>Result</u>
Appearance	White or almost white powder	White powder
Identification	Positive	Positive
pH	5.8 ~ 7.0	6.8
Appearance of solution	Clear	Conforms

Composition

Assay	98.0% ~ 102.0%	99.2%
Loss on drying	NMT 1.0%	0.5%

Safety

Heavy metals	10 ppm max.	< 10 ppm
Arsenic	2.0 ppm max.	< 2 ppm

Microbiology

Total plate count	≤ 3,000 cfu/g	< 3,000 cfu/g
Yeast and mold	≤ 300 cfu/g	< 300 cfu/g
E. coli	Negative	Negative
Salmonella	Negative	Negative

(b) (6)

Juliana Surono

Storage: keep in tightly sealed container at room temperature, away from heat, moisture and light.

Batch Analysis Data

Chemical Analysis Report

Set ID # 1011066

Set Description 1 lot of powder
Date Received 11/22/10
Date(s) Analyzed 12/06/10 thru 12/08/10
Date Reported 12/08/10
Company Name AIDP, Inc
Directed To Juliana Surjono
Address 17920 E. Ajax Circle
City of Industry, CA 91748

Sample Preparation and Analysis Conditions:

For L-threonate, a weighed portion of the sample was dissolved/extracted in distilled water, filtered, and then analyzed under the following instrumental conditions:

Chromatograph: High performance liquid chromatograph (Hewlett Packard Model 1090 II / L)

Column: Synergi Hydro-RP, 150 x 3.0mm, 4µm, 80Å

Detector: Photodiode array, scanning from 190 to 600 nm; quantitation at 205 nm

Magnesium results provided by Advanced Laboratories® Inc., Salt Lake City, UT. After appropriate digestion, the sample was analyzed by Inductive Coupled Plasma Mass Spectroscopy (ICP/OES) using AOAC method 990.08.

Analytical Results

Reporting results to three significant figures is for statistical evaluation only
and is not intended to be an indication of analytical precision

Sample Identification		Magnesium mg/g	L-Threonate mg/g
Laboratory ID#	1011066	87.0	874.
Client ID#	Magnesium L-Threonate		
	Lot# 20101001		

Analyzed _____ Release Authorized _____
By _____ By _____ Date _____

Page 1 of 1

The results provided in this report represent to the fullest extent possible under the criteria for good faith and professionalism in the field of analytical chemistry, true and factual data that are provided for the sole use of the addressee. Any use of the report or its contents except under the guidelines of this expressed intent is not condoned or permitted.

000069



Advanced Laboratories®, Inc.

"Unconventional by Design"

FDA Registration #3006423386

40 West Louise Ave., Salt Lake City, UT 84115

Phone: (801) 485-1800 Fax: (801) 484-9211

Email: utlab@advancedlabsinc.com

Test Certificate

Sample Description: Magnesium L-Threonate

Sample Lot Number: 20101001

Sample Part Code:

Location:

PO No:

Received Date: 3/11/11 12:50

Completed Date: 3/15/2011

Client Name: AIDP, Inc

and Address: Attn: Juliana Surjono
17920 East Ajax Circle
City of Industry, CA 91748

Lab No: 56576-01

Lab Comments:

Analysis	Result	Per Unit	Method
Magnesium	8.60	%	ICP-OES AOAC 990.08

THESE RESULTS ARE ASSIGNED ONLY TO THE SAMPLE SUBMITTED NOT TO THE PRODUCT IT WAS TAKEN FROM.

THIS CERTIFICATE SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL FROM THE LABORATORY.

Results Approved By:

(b) (6)

Shane Shupe

Dated: 3/15/2011

Printed: 3/24/2011 1:14:07 PM

Page 1 of 1

Residual Solvent Analysis



Eurofins Scientific Inc., Petaluma
1365 Redwood Way
Petaluma, CA 94954

Tel. +1 707 792 7300
Fax: +1 707 792 7309

02/24/2011

Juliana Surjono
AIDP
17920 Ajax Circle
City of Industry, CA 91740-1133

CERTIFICATE OF ANALYSIS

AR-11-KK-001893-01

Batch#EUCAPE-00016276

Sample Identification:

Sample #: 740-2011-00001592

Description: Magnesium L-Threonate, Powder, Lot #20101001

Condition: White powder in gold heat sealed pouch with clear back received at room temperature.

Date Received: 02/17/2011

Method:

QA04D: Residual Solvents (GC-MS)

Date Completed:

02/24/2011

Results:

Sample #740-2011-00001592

Test	Result	Units
Methanol	<5.0	mg/kg
Acetone	<5.0	mg/kg
1-Butanol	<5.0	mg/kg
Ethylacetate	<1.0	mg/kg
Benzene	<0.1	mg/kg
Toluene	<0.5	mg/kg
Isopropanol	<5.0	mg/kg
Chloroform	<0.1	mg/kg
1,1,1-Trichloroethane	<0.5	mg/kg
Trichloroethylene	<1.0	mg/kg
Dichloromethane	<0.5	mg/kg
1,1,2-Trichloroethane	<0.5	mg/kg
Hexane (sum of normal, iso, and 3-methyl pentane	<0.5	mg/kg
Butyl acetate	<0.5	mg/kg
Ethanol	1,200	mg/kg
1,2-dichloroethane	<0.5	mg/kg
Cyclohexane	<2.0	mg/kg
Heptane	<1.0	mg/kg
Methylethylketone (MEK)	<0.2	mg/kg
MTBE (methyl-tert.-butylether)	<0.1	mg/kg

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Page 1 of 2

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000071



AIDP
17920 Ajax Circle
City of Industry, CA
91740-1133

Sample #740-2011-00001592

Test	Result	Units
------	--------	-------

Results relate only to the items tested.
Estimation of uncertainty of measurement is available upon request.
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(b) (6)

Jennifer Coulter
Client Services Supervisor

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Appendix 3

Estimated Daily Intake of Magnesium L-Threonate by the U.S. Population from Proposed Food-Uses

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Estimated Daily Intake of Magnesium L-Threonate by the U.S. Population from Proposed Food-Uses

Prepared for: Magceutics, Inc.
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April 5, 2013

Estimated Daily Intake of Magnesium L-Threonate by the U.S. Population from Proposed Food-Uses

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Estimated Daily Intake of Magnesium L-Threonate by the U.S. Population from Proposed Food-Uses

1.0 INTRODUCTION

Magnesium L-threonate is proposed for use in the United States (U.S.) as a nutritional source of magnesium in foods, such as alcoholic beverages, baked goods and baking mixes, beverages and beverage bases, breakfast cereals, chewing gum, egg products, grain products and pastas, hard candy, meat products, milk products, processed fruits and fruit juices, processed vegetables and vegetable juices, snack foods, soft candy, and soups and soup mixes.

Estimates for the intake of magnesium L-threonate were based on the proposed food-uses and use-levels in conjunction with food consumption data included in the US National Center for Health Statistics' (NCHS) National Health and Nutrition Examination Surveys (NHANES) (CDC, 2011; USDA, 2012). Calculations for the mean and 90th percentile all-person and all-user intakes were performed for each of the individual proposed food-uses of magnesium L-threonate and the percentage of consumers were determined. Similar calculations were used to estimate the total intake of magnesium L-threonate resulting from all proposed food-uses of magnesium L-threonate combined. In both cases, the per person and per kilogram body weight intakes were reported for the following population groups:

- infants, ages 0 to 2;
- children, ages 3 to 11;
- female teenagers, ages 12 to 19;
- male teenagers, ages 12 to 19;
- female adults, ages 20 and up;
- male adults, ages 20 and up; and
- total population (all age and gender groups combined).

2.0 FOOD CONSUMPTION SURVEY DATA

2.1 Survey Description

NHANES for the years 2009-2010 are available for public use. NHANES are conducted as continuous, annual surveys, and are released in 2-year cycles. Each year about 7,000 people from 15 different locations across the U.S. are interviewed, and approximately 5,000 complete the health examination component of the survey. Any combination of consecutive years of data collection is recognized and used as a nationally representative sample of the U.S. population. It is well-established that the length of a dietary survey affects the estimated consumption of individual users and that short-term surveys, such as a 1-day dietary survey, may overestimate consumption compared to surveys conducted over longer time periods (Anderson, 1988). Because two 24-hour dietary recalls administered on 2 non-consecutive days are available from the NHANES 2009-2010 survey, these data were used to generate estimates for the current intake analysis.

NHANES 2009-2010 survey data were collected from individuals and households via 24-hour dietary recalls administered on 2 non-consecutive days (Day 1 and Day 2) throughout all 4 seasons of the year. Day 1 data were collected in-person, and Day 2 data were collected by telephone in the following 3 to 10 days, on different days of the week, to achieve the desired degree of statistical independence. The data were collected by first selecting Primary Sampling Units (PSUs), which were counties throughout the U.S., of which 15 PSUs are visited per year. Small counties were combined to attain a minimum population size. These PSUs were segmented and households were chosen within each segment. One or more participants within a household were interviewed. For NHANES 2009-2010, 13,272 individuals were selected for the sample, 10,537 were interviewed (79.4%), and 10,253 were sampled (77.3%).

In addition to collecting information on the types and quantities of foods being consumed, NHANES 2009-2010 collected socio-economic, physiological and demographic information from individual participants in the survey, such as sex, age, height and weight, and other variables useful in characterizing consumption. The inclusion of this information allows for further assessment of food intake based on consumption by specific population groups of interest within the total population. Sample weights were incorporated with NHANES 2009-2010 data to compensate for the potential under-representation of intakes from specific population groups as a result of sample variability due to survey design, differential non-response rates, or other factors, such as deficiencies in the sampling frame (CDC, 2011; USDA, 2012).

2.2 Statistical Methods

Statistical analysis and data management were conducted in Creme software (www.cremeglobal.com) (Creme, 2013). Creme Food 3.6 is a probabilistic modeling software tool that uses high-performance computing to allow accurate estimates of exposure. The main input components are concentration (use level) data and food consumption data. Data sets are combined using the Creme Food 3.6 model to provide accurate and efficient exposure assessments.

For the deterministic assessment, consumption data from individual dietary records, detailing food items ingested by each survey participant, were collated by computer and used to generate estimates for the intake of magnesium L-threonate by the U.S. population using Creme software. Estimates for the daily intake of magnesium L-threonate represent projected 2-day averages for each individual from Day 1 and Day 2 of NHANES 2009-2010 data; these average amounts comprised the distribution from which mean and percentile intake estimates were generated. Mean and percentile estimates were generated incorporating survey weights in order to provide representative intakes for the entire U.S. population. All-person intake refers to the estimated intake of magnesium L-threonate averaged over all individuals surveyed, regardless of whether they potentially consumed food products containing magnesium L-threonate, and therefore includes individuals with “zero” intakes (*i.e.* those who reported no intake of food products containing magnesium L-threonate during the 2 survey days). All-user intake refers to the estimated intake of magnesium L-threonate by those individuals who reported consuming food products containing magnesium L-threonate, hence the “all-user” designation. Individuals were considered ‘users’ if they consumed 1 or more food products containing magnesium L-threonate on either Day 1 or Day 2 of the survey.

Mean or percentile intake estimates based on small sample sizes may be less statistically reliable than estimates based on adequate sample sizes (LSRO, 1995). Therefore, for the estimated intakes of magnesium L-threonate presented herein, values were considered statistically unreliable if the sample included less than 30 respondents. These values were not considered when assessing the relative contribution of specific food-uses to total magnesium L-threonate consumption and are marked with an asterisk in Appendices A and B.

3.0 FOOD USAGE DATA

The individual proposed food-uses and use-levels for magnesium L-threonate employed in the current intake analysis are summarized in Table 3-1. Food codes representative of each proposed food-use were chosen from the NHANES 2009-2010 (CDC, 2011; USDA, 2012). Food codes were grouped in food-use categories according to Title 21, Section §170.3 of the Code of Federal Regulations (CFR, 2012). Product-specific adjustment factors were developed based on data provided in the standard recipe file for the Continuing Survey of Food Intakes by Individuals (CSFII) 1994-1996, 1998 survey (USDA, 2000). All food codes included in the current intake assessment are listed in Appendix C.

Table 3-1 Summary of the Individual Proposed Uses and Use-Levels of Magnesium L-Threonate in the United States (NHANES 2009-2010)			
Food Category	Food-Uses	Mg Level (%)*	Mg L-Threonate Use-Levels (%)*
Alcoholic Beverages	Distilled Liquors	0.006815	0.0885
	Malted Beverages	0.006815	0.0885
	Wine	0.006815	0.0885
Baked Goods and Baking Mixes	Biscuits	0.00924	0.12
	Breads and Rolls, including bagels and pizza dough	0.00924	0.12
	Cakes and Cupcakes	0.00924	0.12
	Cookies and Brownies	0.00924	0.12
	Cornbread and Tortillas	0.00924	0.12
	Crackers	0.00924	0.12
	Muffins and English Muffins	0.00924	0.12
	Pancakes and Waffles	0.00924	0.12
	Pastries, including Doughnuts, Pies and Turnovers	0.00924	0.12
Beverages and Beverage Bases	Bottled Water	0.006815	0.0885
	Carbonated Fruit drinks	0.006815	0.0885
	Carbonated Soft Drinks	0.006815	0.0885
	Energy and Sports Drinks	0.006815	0.0885
	Fruit Drinks and Aides (RTD and powder)	0.006815	0.0885
Breakfast Cereals	Instant and Regular Hot Cereals	0.00924	0.12
	Ready-to-Eat Breakfast Cereals	0.00924	0.12
Chewing Gum	Chewing Gum	0.00924	0.12
Egg Products	Liquid, Frozen or Dried Eggs	0.00924	0.12
	Commercially Prepared Egg Dishes	0.00924	0.12
Grain Products and Pastas	Cereal Grains, prepared (rice, corn, oats, rye, wheat, flour, etc)	0.00924	0.12

Table 3-1 Summary of the Individual Proposed Uses and Use-Levels of Magnesium L-Threonate in the United States (NHANES 2009-2010)

Food Category	Food-Uses	Mg Level (%)*	Mg L-Threonate Use-Levels (%)*
	Granola, Meal Replacement, and Breakfast Bars	0.00924	0.12
	Pasta and Noodles	0.00924	0.12
Hard Candy	Hard Candy	0.00924	0.12
Meat Products	Processed Meat (ham, sausages, lunchmeats)	0.00924	0.12
Milk Products	Dietetic Milk Products	0.006437	0.0836
	Milk-Based Beverages	0.006437	0.0836
Processed Fruits and Fruit Juices	Fruit Juice	0.006815	0.0885
	Processed Fruits	0.00924	0.12
Processed Vegetables and Vegetable Juices	Vegetable Juice	0.006815	0.0885
Snack Foods	Salty Snacks	0.00924	0.12
Soft Candy	Chocolate and Candy Bars	0.00924	0.12
	Soft Candy	0.00924	0.12
Soups and Soup Mixes	Non-cream soups	0.003642	0.0473

*Magnesium L-threonate hydrate contains elemental magnesium in a concentration of 7.7%.

4.0 FOOD SURVEY RESULTS

Estimates for the total daily intakes of magnesium L-threonate from proposed food-uses are provided in Tables 4.1-1 and 4.1-2. Further to this, estimates for the total daily intakes of magnesium from the use of magnesium L-threonate in proposed food-uses are provided in Tables 4.1-3 and 4.1-4. Estimates for the daily intake of magnesium L-threonate from individual proposed food-uses in the U.S. are summarized in Tables A-1 to A-7 and B-1 to B-7 of Appendices A and B, respectively. Tables A-1 to A-7 provide estimates for the daily intake of magnesium L-threonate per person (mg/day), whereas Tables B-1 to B-7 provide estimates for the daily intake of magnesium L-threonate on a per kilogram body weight basis (mg/kg body weight/day).

4.1 Estimated Daily Intake of Magnesium L-Threonate from All Proposed Food-Uses in the U.S.

Table 4.1-1 summarizes the estimated total intake of magnesium L-threonate (mg/person/day) from all proposed food-uses in the U.S. population group. Table 4.1-2 presents this data on a per kilogram body weight basis (mg/kg body weight/day). The percentage of users was high among all age groups evaluated in the current intake assessment; greater than 81.0% of the

population groups consisted of users of those food products in which magnesium L-threonate is currently proposed for use (Table 4.1-1). All population groups with the exception of infants were reported to consist wholly of consumers of products containing magnesium L-threonate, with percent users at 100%. Infants had the lowest percent users at 81.0%. Large user percentages within a population group typically lead to similar results for the all-person and all-user consumption estimates. Consequently, only the all-user intake results will be discussed in detail.

Of the individual population groups, male adults (aged 20 years and older) were determined to have the greatest mean and 90th percentile all-user intakes of magnesium L-threonate on an absolute basis, at 1,659 and 3,009 mg/person/day, respectively, while infants (aged 2 years and under) had the lowest mean and 90th percentile all-user intakes of 536 and 1,030 mg/person/day, respectively (Table 4.1-1).

Table 4.1-1 Summary of the Estimated Daily Intake of Magnesium L-Threonate from All Proposed Food-Uses in the U.S. by Population Group (2009-2010 NHANES Data)							
Population Group	Age (years)	All Person (mg)		All User (mg)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	464	984	81.0	672	536	1,030
Children	3 to 11	963	1,508	100	1,430	963	1,508
Female Teenagers	12 to 19	1,185	1,847	100	520	1,185	1,847
Male Teenagers	12 to 19	1,538	2,687	100	567	1,538	2,687
Female Adults	20 and up	1,193	2,134	100	2,649	1,193	2,134
Male Adults	20 and up	1,659	3,009	100	2,387	1,659	3,009
Total Population	All Ages	1,310	2,370	99.1	8,225	1,322	2,371

On a body weight basis, infants were identified as having the highest mean and 90th percentile all-user intakes of any population group, of 43 and 80 mg/kg body weight/day, respectively. Female adults (aged 20 years and over) had the lowest mean and 90th percentile all-user intakes of 17 and 30 mg/kg body weight/day, respectively (Table 4.1-2).

Table 4.1-2 Summary of the Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from All Proposed Food-Uses in the U.S. by Population Group (2009-2010 NHANES Data)

Population Group	Age (years)	All Person (mg/kg bw)		All User (mg/kg bw)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	35	76	81.0	672	43	80
Children	3 to 11	36	61	100	1,430	36	61
Female Teenagers	12 to 19	20	34	100	520	20	34
Male Teenagers	12 to 19	23	38	100	567	23	38
Female Adults	20 and up	17	30	100	2,649	17	30
Male Adults	20 and up	19	34	100	2,387	19	34
Total Population	All Ages	21	40	99.1	8,225	21	40

As with the results for magnesium L-threonate, male adults were determined to have the greatest mean and 90th percentile all-user intakes of magnesium on an absolute basis, at 128 and 232 mg/person/day, respectively, while infants had the lowest mean and 90th percentile all-user intakes of 41 and 79 mg/person/day, respectively (Table 4.1-3).

Table 4.1-3 Summary of the Estimated Daily Intake of Magnesium from All Proposed Food-Uses of Magnesium L-Threonate in the U.S. by Population Group (2009-2010 NHANES Data)

Population Group	Age (years)	All Person (mg)		All User (mg)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	33	76	81.0	672	41	79
Children	3 to 11	74	116	100	1,430	74	116
Female Teenagers	12 to 19	91	142	100	520	91	142
Male Teenagers	12 to 19	118	207	100	567	118	207
Female Adults	20 and up	92	164	100	2,649	92	164
Male Adults	20 and up	128	232	100	2,387	128	232
Total Population	All Ages	101	182	99.1	8,225	102	183

Furthermore, on a body weight basis, infants and children were identified as having the highest mean intakes of magnesium, of 3 mg/kg body weight/day, while infants had the highest 90th percentile all-user intakes of magnesium of any population group, of 6 mg/kg body weight/day. Female and male adults had the lowest mean all-user intakes of magnesium, of 1 mg/kg body weight/day, while female adults had the lowest 90th percentile all-user intakes of magnesium, of 2 mg/kg body weight/day (Table 4.1-4).

Table 4.1-4 Summary of the Estimated Daily Per Kilogram Body Weight Intake of Magnesium from All Proposed Food-Uses of Magnesium L-Threonate in the U.S. by Population Group (2009-2010 NHANES Data)

Population Group	Age (years)	All Person (mg/kg bw)		All User (mg/kg bw)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	3	6	81.0	672	3	6
Children	3 to 11	3	5	100	1,430	3	5
Female Teenagers	12 to 19	2	3	100	520	2	3
Male Teenagers	12 to 19	2	3	100	567	2	3
Female Adults	20 and up	1	2	100	2,649	1	2
Male Adults	20 and up	1	3	100	2,387	1	3
Total Population	All Ages	2	3	99.1	8,225	2	3

4.2 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses in the U.S.

Estimates for the mean and 90th percentile daily intakes of magnesium L-threonate from each individual food category are summarized in Tables A-1 to A-7 and B-1 to B-7 on a mg/day and mg/kg body weight/day basis, respectively. The total U.S. population was identified as being significant consumers of breads and rolls (50.8 to 91.7% users), processed meat (36.5 to 66.8% users), bottled water (34.2 to 55.2% users), and carbonated soft drinks (6.2 to 53.4% users).

In terms of contribution to total mean intake of magnesium L-threonate, bottled water (contributed 21.6 to 28.7% to total mean intakes) and carbonated soft drinks (contributed 11.3 to 15.6% to total mean intakes) were the 2 main sources of intake among female and male teenagers and female and male adults on both an absolute and on a mg/kg body weight basis. Among infants, the consumption of bottled water (14.4% to the total mean intakes) and fruit juice (20.7% to the total mean intakes) made the greatest contribution to the intakes on an absolute and mg/kg body weight basis, while among children, the consumption of bottled water (15.2% to the total mean intakes) and fruit drinks and ades (11.2% to the total mean intakes) made the greatest contributions to the intakes on absolute and mg/kg body weight bases. Chewing gum; liquid, frozen, and dried eggs; commercially-prepared egg dishes; and hard candy all individually contributed ≤0.2% to total mean magnesium L-threonate intakes across all population groups (see Tables A-1 to A-7 and/or B-1 to B-7 for further details).

5.0 CONCLUSIONS

Consumption data and information pertaining to the individual proposed food-uses of magnesium L-threonate were used to estimate the all-person and all-user intakes of magnesium L-threonate for specific demographic groups and for the total U.S. population. This type of intake methodology is generally considered to be 'worst case' as a result of several conservative assumptions made in the consumption estimates. For example, it is often assumed that all food products within a food category contain the ingredient at the maximum specified level of use. In addition, it is well-established that the length of a dietary survey affects the estimated consumption of individual users. Short-term surveys, such as the typical 2- or 3-day dietary surveys, may overestimate the consumption of food products that are consumed relatively infrequently.

In summary, on an all-user basis, the total population had mean and 90th percentile all-user intakes of magnesium L-threonate of 1,322 and 2,371 mg/person/day (21 and 40 mg/kg body weight/day, respectively), respectively. Furthermore, the highest mean and 90th percentile intakes of magnesium L-threonate by the U.S. population from all proposed food-uses in the U.S., as observed in male adults were estimated to be 1,659 mg/person/day (21 mg/kg body weight/day) and 3,009 mg/person/day (40 mg/kg body weight/day), respectively. Infants had the lowest mean and 90th percentile all-user intakes of 536 mg/person/day (43 mg/kg body weight/day) and 1,030 mg/person/day (80 mg/kg body weight/day), respectively.

The resulting magnesium intakes from the addition of magnesium L-threonate to the proposed food-uses described in section 3.0 among the total population on a mean and 90th percentile all-user basis were 102 and 183 mg/person day (2 and 3 mg/kg body weight/day, respectively), respectively. Furthermore, male adults were determined to have the greatest mean and 90th percentile all-user intakes of magnesium on an absolute basis, at 128 and 232 mg/person/day, respectively, while infants had the lowest mean and 90th percentile all-user intakes of 41 and 79 mg/person/day.

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APPENDIX A

Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Different Population Groups Within the U.S. (NHANES 2009-2010 data)

Table A-1 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Infants Aged 0 to 2 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	434	984	81.0	672	536	1,030
<u>Alcoholic beverages</u>							
Distilled Liquors	0	na	na	0	0	na	na
Malted Beverages	0	na	na	0	0	na	na
Wine	0	na	na	0	0	na	na
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	1*	na	3.1	18	24*	33*
Breads and Rolls	4.6	20	56	50.8	394	40	83
Cakes and Cupcakes	0.3	1	na	5.5	35	26	51
Cookies and Brownies	1.0	5	13	23.6	204	19	41
Cornbread and Tortillas	0.9	4	14	16.9	180	23	54
Crackers	1.8	8	24	46.4	341	17	36
Muffins and English Muffins	0.4	2*	na	5.4	24	33*	54*
Pancakes and Waffles	1.4	6	22	13.9	101	44	82
Pastries	0.9	4	8	10.7	70	36	76
<u>Beverages and Beverage Bases</u>							
Bottled Water	14.4	62	231	34.2	302	183	369
Carbonated Fruit Drinks	1.3	6	na	7.4	53	75	131
Carbonated Soft Drinks	0.7	3	na	6.2	53	50	106
Energy and Sports Drinks	1.4	6	na	4.0	36	153	358
Fruit Drinks and Ades	10.1	44	163	24.9	202	177	364
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	3.6	16	47	11.2	83	139	226
Ready-to-Eat Breakfast Cereals	1.9	8	26	47.5	362	17	34
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1*	na	0.2	4	2*	2*
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1*	na	< 0.1	1	8*	8*
Commercially Prepared Egg Dishes	0	na	na	0	0	na	na

Table A-1 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Infants Aged 0 to 2 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.7	12	36	25.6	214	46	98
Granola, Meal Replacement, and Breakfast Bars	0.4	2	na	8.0	46	21	30
Pasta and Noodles	5.5	24	78	36.5	256	65	129
<u>Hard Candy</u>							
Hard Candy	0.2	1	na	9.1	67	10	18
<u>Meat Products</u>							
Processed Meat	3.2	14	45	36.5	271	39	74
<u>Milk Products</u>							
Dietetic Milk Products	9.1	40	89	25.4	179	157	458
Milk-Based Beverages	5.4	23	na	9.9	80	236	513
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	20.7	90	278	47.8	412	188	400
Processed Fruits	2.6	11	43	18.5	113	61	120
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	1.1	5*	na	2.9	14	169*	357*
<u>Snack Foods</u>							
Salty Snacks	1.1	5	15	27.4	215	18	42
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.2	1	na	9.5	64	9	17
Soft Candy	0.5	2	8	14.3	113	16	31
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	2.1	9	41	17.7	186	51	102

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table A-2 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Children Aged 3 to 11 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	963	1,508	100.0	1,430	963	1,508
<u>Alcoholic beverages</u>							
Distilled Liquors	0	na	na	0	0	na	na
Malted Beverages	0	na	na	0	0	na	na
Wine	< 0.1	< 1*	na	0.2	1	6*	6*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	2	na	6.4	86	33	57
Breads and Rolls	7.5	73	143	91.0	1,278	80	150
Cakes and Cupcakes	0.5	5	17	11.0	150	43	77
Cookies and Brownies	1.3	13	39	41.4	572	31	70
Cornbread and Tortillas	1.4	13	44	28.7	510	46	94
Crackers	0.9	8	28	36.4	493	23	47
Muffins and English Muffins	0.5	4	na	5.4	64	82	156
Pancakes and Waffles	1.6	15	52	28.4	344	54	94
Pastries	1.3	12	45	20.7	281	60	130
<u>Beverages and Beverage Bases</u>							
Bottled Water	15.2	146	438	46.0	700	317	649
Carbonated Fruit Drinks	4.7	45	162	26.0	382	174	324
Carbonated Soft Drinks	5.7	55	161	32.3	452	169	322
Energy and Sports Drinks	1.8	17	na	7.9	105	220	427
Fruit Drinks and Ades	11.2	108	316	50.8	791	213	431
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.0	10	na	7.0	104	143	263
Ready-to-Eat Breakfast Cereals	2.1	21	53	61.3	934	34	63
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	4.2	66	3	5
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	0	na	na	0	0	na	na
Commercially Prepared Egg Dishes	0	na	na	0	0	na	na

Table A-2 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Children Aged 3 to 11 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.5	24	87	30.9	504	77	163
Granola, Meal Replacement, and Breakfast Bars	0.3	3	14	12.3	141	25	45
Pasta and Noodles	4.4	42	128	42.0	574	100	205
<u>Hard Candy</u>							
Hard Candy	0.2	2	8	16.4	206	13	24
<u>Meat Products</u>							
Processed Meat	3.6	34	84	65.7	898	52	105
<u>Milk Products</u>							
Dietetic Milk Products	9.1	87	298	45.1	553	193	448
Milk-Based Beverages	8.0	77	224	44.0	607	175	319
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	9.1	88	220	56.1	853	157	292
Processed Fruits	1.5	14	54	18.8	260	75	160
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.5	4*	na	1.9	24	229*	390*
<u>Snack Foods</u>							
Salty Snacks	1.6	16	45	52.1	728	30	59
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.5	4	16	21.2	274	21	49
Soft Candy	0.5	5	17	24.0	313	21	45
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.5	14	60	18.1	301	78	124

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table A-3 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,185	1,847	100.0	520	1,185	1,847
<u>Alcoholic beverages</u>							
Distilled Liquors	< 0.1	1*	na	0.5	4	100*	110*
Malted Beverages	1.9	23*	na	2.4	9	939*	1,951*
Wine	0.2	2*	na	1.7	2	138*	209*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.3	4*	na	6.1	24	63*	96*
Breads and Rolls	6.4	76	150	89.9	455	84	153
Cakes and Cupcakes	0.7	8	24	13.2	68	61	120
Cookies and Brownies	0.8	10	33	31.6	181	30	58
Cornbread and Tortillas	1.3	15	46	31.9	187	47	84
Crackers	0.4	4	16	19.5	83	22	46
Muffins and English Muffins	0.2	3*	na	6.4	25	45*	78*
Pancakes and Waffles	0.8	9	44	14.0	61	67	112
Pastries	1.3	15	52	20.9	110	74	175
<u>Beverages and Beverage Bases</u>							
Bottled Water	24.4	289	798	55.2	302	524	1,092
Carbonated Fruit Drinks	8.0	95	297	36.7	201	260	554
Carbonated Soft Drinks	11.3	134	408	42.3	213	317	659
Energy and Sports Drinks	2.4	28	107	12.8	63	219	391
Fruit Drinks and Ades	8.5	101	305	38.4	223	262	608
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	0.5	6*	na	3.4	20	185*	306*
Ready-to-Eat Breakfast Cereals	1.4	17	54	40.7	218	41	62
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	8.0	40	3	5
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1*	na	0.2	2	79*	87*
Commercially Prepared Egg Dishes	0	na	na	0	0	na	na

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Table A-3 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
Grain Products and Pastas							
Cereal Grains, prepared	2.1	25	105	27.9	180	90	190
Granola, Meal Replacement, and Breakfast Bars	0.2	2	12	10.7	45	20	27
Pasta and Noodles	4.9	58	218	40.3	177	144	308
Hard Candy							
Hard Candy	0.1	1	na	9.6	57	13	22
Meat Products							
Processed Meat	3.0	35	85	59.5	292	59	121
Milk Products							
Dietetic Milk Products	5.2	62	203	35.2	146	176	345
Milk-Based Beverages	3.8	45	183	28.0	130	161	260
Processed Fruits and Fruit Juices							
Fruit Juice	6.4	76	218	41.5	247	184	340
Processed Fruits	0.5	6	na	10.0	45	63	103
Processed Vegetables and Vegetable Juices							
Vegetable Juice	0.1	1*	na	0.8	6	112*	286*
Snack Foods							
Salty Snacks	1.3	15	44	44.6	247	35	64
Soft Candy							
Chocolate and Candy Bars	0.6	7	26	24.6	120	27	56
Soft Candy	0.3	3	8	14.4	78	21	49
Soup and Soup Mixes							
Non-Cream Soups	0.7	8	na	8.8	76	90	166

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table A-4 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,538	2,687	100.0	567	1,538	2,687
<u>Alcoholic beverages</u>							
Distilled Liquors	0.1	2*	na	1.3	8	180*	313*
Malted Beverages	1.7	26*	na	2.7	20	964*	1,524*
Wine	< 0.1	< 1*	na	0.1	2	129*	202*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	4	na	6.8	32	52	86
Breads and Rolls	8.1	124	250	91.7	523	136	250
Cakes and Cupcakes	0.2	3	na	7.1	33	46	102
Cookies and Brownies	0.7	10	40	30.5	190	34	59
Cornbread and Tortillas	1.4	21	67	32.4	222	65	138
Crackers	0.2	3	8	13.4	74	25	55
Muffins and English Muffins	0.1	2*	na	3.2	27	71*	102*
Pancakes and Waffles	1.0	15	63	18.1	93	81	149
Pastries	1.2	19	65	21.5	109	89	167
<u>Beverages and Beverage Bases</u>							
Bottled Water	22.0	338	950	51.5	305	657	1,558
Carbonated Fruit Drinks	9.7	149	486	34.0	206	438	863
Carbonated Soft Drinks	12.4	191	538	47.2	256	404	756
Energy and Sports Drinks	4.6	71	256	19.4	94	364	861
Fruit Drinks and Ades	6.8	105	330	36.5	217	287	645
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	0.4	6*	na	2.6	17	221*	293*
Ready-to-Eat Breakfast Cereals	1.5	23	72	44.3	261	52	112
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1*	na	5.1	28	2*	5*
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	1*	na	0.4	4	134*	160*
Commercially Prepared Egg Dishes	0	na	na	0	0	na	na

Table A-4 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.3	51	131	31.7	199	160	332
Granola, Meal Replacement, and Breakfast Bars	0.1	2	na	6.9	43	26	43
Pasta and Noodles	2.5	39	137	32.3	181	120	222
<u>Hard Candy</u>							
Hard Candy	0.1	1	na	7.4	37	19	44
<u>Meat Products</u>							
Processed Meat	3.8	58	151	63.2	357	93	168
<u>Milk Products</u>							
Dietetic Milk Products	4.7	73	234	32.0	164	228	539
Milk-Based Beverages	3.4	53	198	25.9	154	204	441
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	5.3	81	272	35.2	244	230	476
Processed Fruits	0.4	6	na	6.1	35	98	177
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.1	2*	na	1.0	8	184*	221*
<u>Snack Foods</u>							
Salty Snacks	1.6	24	64	51.9	270	47	88
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	6	27	19.0	109	32	68
Soft Candy	0.5	8	18	15.0	79	51	114
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.3	20	87	16.4	100	121	225

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table A-5 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,193	2,134	100.0	2,649	1,193	2,134
<u>Alcoholic beverages</u>							
Distilled Liquors	0.4	5	na	6.3	156	73	146
Malted Beverages	2.8	33	na	9.3	212	359	788
Wine	1.7	21	64	13.5	276	152	315
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	2	na	5.7	155	37	59
Breads and Rolls	5.9	71	152	88.6	2,313	80	160
Cakes and Cupcakes	0.7	8	24	13.8	338	57	107
Cookies and Brownies	0.7	9	30	32.1	845	27	54
Cornbread and Tortillas	1.4	16	54	26.5	834	61	135
Crackers	0.5	6	20	30.6	782	19	39
Muffins and English Muffins	0.4	5	na	8.7	181	55	104
Pancakes and Waffles	0.4	5	na	8.3	248	64	109
Pastries	1.2	15	56	18.1	449	80	164
<u>Beverages and Beverage Bases</u>							
Bottled Water	28.7	343	1,087	50.7	1,415	676	1,440
Carbonated Fruit Drinks	4.9	59	162	17.6	510	333	701
Carbonated Soft Drinks	15.6	186	599	48.3	1,214	386	778
Energy and Sports Drinks	0.8	10	na	4.1	112	248	535
Fruit Drinks and Ades	5.1	61	217	24.0	677	256	552
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	2.4	29	140	16.1	434	182	296
Ready-to-Eat Breakfast Cereals	1.2	14	51	36.7	941	39	71
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	3.8	94	3	7
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1*	na	0.8	17	47*	62*
Commercially Prepared Egg Dishes	< 0.1	< 1*	na	< 0.1	1	106*	106*

Table A-5 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.4	29	98	34.3	966	85	188
Granola, Meal Replacement, and Breakfast Bars	0.2	2	na	9.1	183	25	43
Pasta and Noodles	2.4	29	104	28.5	710	101	198
<u>Hard Candy</u>							
Hard Candy	0.1	1	na	6.1	160	18	52
<u>Meat Products</u>							
Processed Meat	3.0	36	101	57.6	1,506	63	137
<u>Milk Products</u>							
Dietetic Milk Products	6.1	73	223	41.8	973	174	396
Milk-Based Beverages	1.4	16	na	9.2	305	178	325
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	4.7	56	197	36.1	1,027	156	327
Processed Fruits	0.9	11	31	18.2	412	59	143
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.5	6	na	3.2	79	196	337
<u>Snack Foods</u>							
Salty Snacks	0.9	11	36	33.0	821	33	68
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.5	6	23	24.9	588	24	52
Soft Candy	0.2	3	3	11.5	279	23	53
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.3	16	67	18.0	537	88	169

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table A-6 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,659	3,009	100.0	2,387	1,659	3,009
<u>Alcoholic beverages</u>							
Distilled Liquors	0.7	11	18	11.4	232	97	238
Malted Beverages	13.2	220	788	31.1	655	707	1,472
Wine	0.8	14	13	10.7	216	129	270
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	4	na	6.8	142	52	99
Breads and Rolls	6.5	107	226	90.5	2,127	119	236
Cakes and Cupcakes	0.5	9	23	12.4	271	71	132
Cookies and Brownies	0.7	11	40	30.1	762	37	77
Cornbread and Tortillas	1.4	23	79	26.6	754	87	180
Crackers	0.3	5	18	20.3	451	24	48
Muffins and English Muffins	0.3	5	na	6.4	144	70	139
Pancakes and Waffles	0.4	7	na	8.6	189	79	155
Pastries	1.2	21	80	22.0	498	94	182
<u>Beverages and Beverage Bases</u>							
Bottled Water	21.6	358	1,213	44.6	1,101	802	1,801
Carbonated Fruit Drinks	5.5	92	324	22.6	549	406	863
Carbonated Soft Drinks	15.3	255	752	53.4	1,238	477	968
Energy and Sports Drinks	2.5	41	131	10.8	219	377	749
Fruit Drinks and Ades	4.9	81	289	24.1	585	334	692
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.6	26	99	11.5	305	229	451
Ready-to-Eat Breakfast Cereals	1.1	18	61	34.3	774	53	96
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	2.9	63	5	17
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1*	na	0.5	14	69*	92*
Commercially Prepared Egg Dishes	< 0.1	< 1*	na	< 0.1	2	175*	197*

Table A-6 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.8	46	148	34.5	855	135	298
Granola, Meal Replacement, and Breakfast Bars	0.2	3	na	7.7	145	34	62
Pasta and Noodles	2.2	36	131	27.8	605	129	249
<u>Hard Candy</u>							
Hard Candy	0.1	1	na	5.4	136	22	41
<u>Meat Products</u>							
Processed Meat	3.4	57	151	66.8	1,569	86	180
<u>Milk Products</u>							
Dietetic Milk Products	3.7	61	202	33.4	685	183	387
Milk-Based Beverages	1.0	16	na	7.7	219	207	414
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	4.3	71	238	36.8	895	193	383
Processed Fruits	0.7	11	22	13.7	315	81	197
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.6	10	na	4.1	80	239	436
<u>Snack Foods</u>							
Salty Snacks	0.9	15	49	34.1	688	43	86
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	6	24	20.4	459	29	62
Soft Candy	0.1	2	na	7.2	165	24	41
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.1	19	74	16.7	422	113	208

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table A-7 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by the Total US Population (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,310	2,370	99.1	8,225	1,322	2,371
<u>Alcoholic beverages</u>							
Distilled Liquors	0.4	6	na	6.4	400	89	194
Malted Beverages	7.0	92	315	14.6	896	628	1,261
Wine	1.0	13	na	9.0	497	142	305
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	3	na	6.1	457	44	86
Breads and Rolls	6.4	84	180	88.1	7,090	96	189
Cakes and Cupcakes	0.6	7	21	12.2	895	59	120
Cookies and Brownies	0.8	10	36	32.0	2,754	31	67
Cornbread and Tortillas	1.4	18	60	27.0	2,687	66	143
Crackers	0.4	6	20	26.9	2,224	21	46
Muffins and English Muffins	0.3	4	na	7.0	465	61	108
Pancakes and Waffles	0.6	8	29	11.9	1,036	65	117
Pastries	1.2	16	65	19.8	1,517	82	170
<u>Beverages and Beverage Bases</u>							
Bottled Water	23.5	308	986	47.6	4,125	648	1,494
Carbonated Fruit Drinks	5.6	73	236	21.8	1,901	334	713
Carbonated Soft Drinks	14.0	183	558	45.8	3,426	400	828
Energy and Sports Drinks	2.0	26	na	8.2	629	314	641
Fruit Drinks and Aides	5.9	77	263	28.7	2,695	269	561
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.7	23	95	11.7	963	194	325
Ready-to-Eat Breakfast Cereals	1.3	17	55	39.9	3,490	42	76
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	3.7	295	4	7
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1	na	0.5	38	59	92
Commercially Prepared Egg Dishes	< 0.1	< 1*	na	< 0.1	3	140*	181*
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.6	35	117	33.1	2,918	105	226
Granola, Meal Replacement, and Breakfast Bars	0.2	2	na	8.9	603	27	47

Table A-7 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by the Total US Population (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
Pasta and Noodles	2.7	35	117	31.1	2,503	112	232
<u>Hard Candy</u>							
Hard Candy	0.1	1	na	7.5	663	17	34
<u>Meat Products</u>							
Processed Meat	3.3	43	120	61.2	4,893	71	152
<u>Milk Products</u>							
Dietetic Milk Products	5.2	68	221	37.6	2,700	182	412
Milk-Based Beverages	2.1	27	104	14.8	1,495	184	349
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	5.3	69	218	39.5	3,678	175	348
Processed Fruits	0.8	11	32	15.6	1,180	69	151
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.5	7	na	3.1	211	216	393
<u>Snack Foods</u>							
Salty Snacks	1.0	13	43	37.1	2,969	36	73
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	6	22	21.9	1,614	26	53
Soft Candy	0.2	3	5	12.0	1,027	24	53
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.2	16	64	16.9	1,622	95	184

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.



APPENDIX B

Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Different Population Groups Within the U.S. (2009-2010 NHANES Data)

000103

Table B-1 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Infants Aged 0 to 2 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	35	76	81.0	672	43	80
<u>Alcoholic beverages</u>							
Distilled Liquors	0	na	na	0	0	na	na
Malted Beverages	0	na	na	0	0	na	na
Wine	0	na	na	0	0	na	na
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	< 1*	na	3.1	18	2*	3*
Breads and Rolls	4.6	2	5	50.8	394	3	7
Cakes and Cupcakes	0.3	< 1	na	5.5	35	2	5
Cookies and Brownies	1.0	< 1	1	23.6	204	2	3
Cornbread and Tortillas	0.9	< 1	1	16.9	180	2	4
Crackers	1.8	1	2	46.4	341	1	3
Muffins and English Muffins	0.4	< 1*	na	5.4	24	3*	5*
Pancakes and Waffles	1.4	1	2	13.9	101	4	7
Pastries	0.9	< 1	1	10.7	70	3	8
<u>Beverages and Beverage Bases</u>							
Bottled Water	14.4	5	18	34.2	302	15	33
Carbonated Fruit Drinks	1.3	< 1	na	7.4	53	6	11
Carbonated Soft Drinks	0.7	< 1	na	6.2	53	4	8
Energy and Sports Drinks	1.4	1	na	4.0	36	14	34
Fruit Drinks and Ades	10.1	3	13	24.9	202	14	26
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	3.6	1	4	11.2	83	12	20
Ready-to-Eat Breakfast Cereals	1.9	1	2	47.5	362	1	3
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1*	na	0.2	4	< 1*	< 1*
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1*	na	< 0.1	1	1*	1*
Commercially Prepared Egg Dishes	0.0	na	na	na	na	na	na

Table B-1 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Infants Aged 0 to 2 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.7	1	3	25.6	214	4	9
Granola, Meal Replacement, and Breakfast Bars	0.4	< 1	na	8.0	46	2	2
Pasta and Noodles	5.5	2	6	36.5	256	5	11
<u>Hard Candy</u>							
Hard Candy	0.2	< 1	na	9.1	67	1	1
<u>Meat Products</u>							
Processed Meat	3.2	1	3	36.5	271	3	6
<u>Milk Products</u>							
Dietetic Milk Products	9.1	3	7	25.4	179	12	37
Milk-Based Beverages	5.4	2	na	9.9	80	18	34
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	20.7	7	23	47.8	412	15	32
Processed Fruits	2.6	1	4	18.5	113	5	11
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	1.1	< 1*	na	2.9	14	13*	38*
<u>Snack Foods</u>							
Salty Snacks	1.1	< 1	1	27.4	215	1	3
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.2	< 1	na	9.5	64	1	1
Soft Candy	0.5	< 1	1	14.3	113	1	2
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	2.1	1	3	17.7	186	4	9

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table B-2 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Children Aged 3 to 11 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	36	61	100.0	1,430	36	61
<u>Alcoholic beverages</u>							
Distilled Liquors	0	na	na	0	0	na	na
Malted Beverages	0	na	na	0	0	na	na
Wine	< 0.1	< 1*	na	0.2	1	< 1*	< 1*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	< 1	na	6.4	86	1	2
Breads and Rolls	7.5	3	5	91.0	1,278	3	5
Cakes and Cupcakes	0.5	< 1	< 1	11.0	150	2	3
Cookies and Brownies	1.3	< 1	2	41.4	572	1	2
Cornbread and Tortillas	1.4	< 1	2	28.7	510	2	3
Crackers	0.9	< 1	1	36.4	493	1	2
Muffins and English Muffins	0.5	< 1	na	5.4	64	3	6
Pancakes and Waffles	1.6	1	2	28.4	344	2	4
Pastries	1.3	< 1	2	20.7	281	2	4
<u>Beverages and Beverage Bases</u>							
Bottled Water	15.2	5	15	46.0	700	11	23
Carbonated Fruit Drinks	4.7	1	5	26.0	382	6	11
Carbonated Soft Drinks	5.7	2	6	32.3	452	6	11
Energy and Sports Drinks	1.8	1	na	7.9	105	7	16
Fruit Drinks and Ades	11.2	4	12	50.8	791	8	18
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.0	< 1	na	7.0	104	6	11
Ready-to-Eat Breakfast Cereals	2.1	1	2	61.3	934	1	3
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	4.2	66	< 1	< 1
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	0	na	na	0	0	na	na
Commercially Prepared Egg Dishes	0	na	na	0	0	na	na

Table B-2 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Children Aged 3 to 11 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.5	1	3	30.9	504	3	7
Granola, Meal Replacement, and Breakfast Bars	0.3	< 1	< 1	12.3	141	1	2
Pasta and Noodles	4.4	2	5	42.0	574	4	8
<u>Hard Candy</u>							
Hard Candy	0.2	< 1	< 1	16.4	206	< 1	1
<u>Meat Products</u>							
Processed Meat	3.6	1	3	65.7	898	2	4
<u>Milk Products</u>							
Dietetic Milk Products	9.1	3	11	45.1	553	7	16
Milk-Based Beverages	8.0	3	9	44.0	607	7	13
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	9.1	4	10	56.1	853	7	13
Processed Fruits	1.5	1	2	18.8	260	3	7
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.5	< 1*	na	1.9	24	10*	17*
<u>Snack Foods</u>							
Salty Snacks	1.6	1	2	52.1	728	1	2
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.5	< 1	1	21.2	274	1	2
Soft Candy	0.5	< 1	1	24.0	313	1	2
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.5	1	2	18.1	301	3	5

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table B-3 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	20	34	100.0	520	20	34
<u>Alcoholic beverages</u>							
Distilled Liquors	< 0.1	< 1*	na	0.5	4	1*	2*
Malted Beverages	1.9	< 1*	na	2.4	9	17*	35*
Wine	0.2	< 1*	na	1.7	2	2*	4*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.3	< 1*	na	6.1	24	1*	1*
Breads and Rolls	6.4	1	3	89.9	455	1	3
Cakes and Cupcakes	0.7	< 1	< 1	13.2	68	1	2
Cookies and Brownies	0.8	< 1	1	31.6	181	1	1
Cornbread and Tortillas	1.3	< 1	1	31.9	187	1	2
Crackers	0.4	< 1	< 1	19.5	83	< 1	1
Muffins and English Muffins	0.2	< 1*	na	6.4	25	1*	1*
Pancakes and Waffles	0.8	< 1	1	14.0	61	1	2
Pastries	1.3	< 1	1	20.9	110	1	3
<u>Beverages and Beverage Bases</u>							
Bottled Water	24.4	5	15	55.2	302	9	18
Carbonated Fruit Drinks	8.0	2	5	36.7	201	4	9
Carbonated Soft Drinks	11.3	2	7	42.3	213	5	12
Energy and Sports Drinks	2.4	< 1	1	12.8	63	3	5
Fruit Drinks and Ades	8.5	2	5	38.4	223	4	10
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	0.5	< 1*	na	3.4	20	3*	6*
Ready-to-Eat Breakfast Cereals	1.4	< 1	1	40.7	218	1	1
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	8.0	40	< 1	< 1
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1*	na	0.2	2	1*	1*
Commercially Prepared Egg Dishes	0	na	na	0	0	na	na

Table B-3 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.1	< 1	2	27.9	180	2	3
Granola, Meal Replacement, and Breakfast Bars	0.2	< 1	< 1	10.7	45	< 1	1
Pasta and Noodles	4.9	1	4	40.3	177	3	5
<u>Hard Candy</u>							
Hard Candy	0.1	< 1	na	9.6	57	< 1	< 1
<u>Meat Products</u>							
Processed Meat	3.0	1	1	59.5	292	1	2
<u>Milk Products</u>							
Dietetic Milk Products	5.2	1	4	35.2	146	3	7
Milk-Based Beverages	3.8	1	3	28.0	130	3	5
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	6.4	1	4	41.5	247	3	6
Processed Fruits	0.5	< 1	na	10.0	45	1	2
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.1	< 1*	na	0.8	6	2*	4*
<u>Snack Foods</u>							
Salty Snacks	1.3	< 1	1	44.6	247	1	1
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.6	< 1	< 1	24.6	120	< 1	1
Soft Candy	0.3	< 1	< 1	14.4	78	< 1	1
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	0.7	< 1	na	8.8	76	1	3

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table B-4 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	23	38	100.0	567	23	38
<u>Alcoholic beverages</u>							
Distilled Liquors	0.1	< 1*	na	1.3	8	2*	4*
Malted Beverages	1.7	< 1*	na	2.7	20	13*	21*
Wine	< 0.1	< 1*	na	0.1	2	2*	3*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	< 1	na	6.8	32	1	1
Breads and Rolls	8.1	2	4	91.7	523	2	4
Cakes and Cupcakes	0.2	< 1	na	7.1	33	1	1
Cookies and Brownies	0.7	< 1	1	30.5	190	1	1
Cornbread and Tortillas	1.4	< 1	1	32.4	222	1	2
Crackers	0.2	< 1	< 1	13.4	74	< 1	1
Muffins and English Muffins	0.1	< 1*	na	3.2	27	1*	2*
Pancakes and Waffles	1.0	< 1	1	18.1	93	1	3
Pastries	1.2	< 1	1	21.5	109	1	2
<u>Beverages and Beverage Bases</u>							
Bottled Water	22.0	5	15	51.5	305	10	21
Carbonated Fruit Drinks	9.7	2	9	34.0	206	6	12
Carbonated Soft Drinks	12.4	3	8	47.2	256	6	12
Energy and Sports Drinks	4.6	1	4	19.4	94	5	10
Fruit Drinks and Ades	6.8	2	5	36.5	217	4	9
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	0.4	< 1*	na	2.6	17	4*	7*
Ready-to-Eat Breakfast Cereals	1.5	< 1	1	44.3	261	1	2
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1*	na	5.1	28	< 1*	< 1*
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1*	na	0.4	4	2*	2*
Commercially Prepared Egg Dishes	0	na	na	0	0	na	na

Table B-4 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.3	1	2	31.7	199	3	5
Granola, Meal Replacement, and Breakfast Bars	0.1	< 1	na	6.9	43	< 1	1
Pasta and Noodles	2.5	1	2	32.3	181	2	3
<u>Hard Candy</u>							
Hard Candy	0.1	< 1	na	7.4	37	< 1	1
<u>Meat Products</u>							
Processed Meat	3.8	1	2	63.2	357	1	3
<u>Milk Products</u>							
Dietetic Milk Products	4.7	1	4	32.0	164	4	10
Milk-Based Beverages	3.4	1	3	25.9	154	3	7
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	5.3	1	4	35.2	244	3	7
Processed Fruits	0.4	< 1	na	6.1	35	1	3
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.1	< 1*	na	1.0	8	3*	4*
<u>Snack Foods</u>							
Salty Snacks	1.6	< 1	1	51.9	270	1	1
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	< 1	< 1	19.0	109	< 1	1
Soft Candy	0.5	< 1	< 1	15.0	79	1	2
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.3	< 1	1	16.4	100	2	3

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table B-5 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	17	30	100.0	2,649	17	30
<u>Alcoholic beverages</u>							
Distilled Liquors	0.4	< 1	na	6.3	156	1	2
Malted Beverages	2.8	< 1	na	9.3	212	5	11
Wine	1.7	< 1	1	13.5	276	2	5
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	< 1	na	5.7	155	< 1	1
Breads and Rolls	5.9	1	2	88.6	2,313	1	2
Cakes and Cupcakes	0.7	< 1	< 1	13.8	338	1	2
Cookies and Brownies	0.7	< 1	< 1	32.1	845	< 1	1
Cornbread and Tortillas	1.4	< 1	1	26.5	834	1	2
Crackers	0.5	< 1	< 1	30.6	782	< 1	1
Muffins and English Muffins	0.4	< 1	na	8.7	181	1	1
Pancakes and Waffles	0.4	< 1	na	8.3	248	1	2
Pastries	1.2	< 1	1	18.1	449	1	2
<u>Beverages and Beverage Bases</u>							
Bottled Water	28.7	5	14	50.7	1,415	9	21
Carbonated Fruit Drinks	4.9	1	3	17.6	510	4	10
Carbonated Soft Drinks	15.6	2	7	48.3	1,214	5	10
Energy and Sports Drinks	0.8	< 1	na	4.1	112	4	7
Fruit Drinks and Ades	5.1	1	3	24.0	677	3	7
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	2.4	< 1	2	16.1	434	3	5
Ready-to-Eat Breakfast Cereals	1.2	< 1	1	36.7	941	1	1
<u>Chewing Gum</u>							
Chewing Gum	<0.1	< 1	na	3.8	94	< 1	< 1
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	<0.1	< 1*	na	0.8	17	1*	1*
Commercially Prepared Egg Dishes	<0.1	< 1*	na	< 0.1	1	1*	1*

Table B-5 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.4	< 1	1	34.3	966	1	3
Granola, Meal Replacement, and Breakfast Bars	0.2	< 1	na	9.1	183	< 1	1
Pasta and Noodles	2.4	< 1	1	28.5	710	1	3
<u>Hard Candy</u>							
Hard Candy	0.1	< 1	na	6.1	160	< 1	1
<u>Meat Products</u>							
Processed Meat	3.0	1	1	57.6	1,506	1	2
<u>Milk Products</u>							
Dietetic Milk Products	6.1	1	3	41.8	973	2	6
Milk-Based Beverages	1.4	< 1	na	9.2	305	3	5
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	4.7	1	3	36.1	1,027	2	4
Processed Fruits	0.9	< 1	< 1	18.2	412	1	2
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.5	< 1	na	3.2	79	3	5
<u>Snack Foods</u>							
Salty Snacks	0.9	< 1	< 1	33.0	821	< 1	1
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.5	< 1	< 1	24.9	588	< 1	1
Soft Candy	0.2	< 1	< 1	11.5	279	< 1	1
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.3	< 1	1	18.0	537	1	2

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table B-6 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	19	34	100.0	2,387	19	34
<u>Alcoholic beverages</u>							
Distilled Liquors	0.7	< 1	< 1	11.4	232	1	2
Malted Beverages	13.2	3	9	31.1	655	8	17
Wine	0.8	< 1	< 1	10.7	216	2	4
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	< 1	na	6.8	142	1	1
Breads and Rolls	6.5	1	3	90.5	2,127	1	3
Cakes and Cupcakes	0.5	< 1	< 1	12.4	271	1	2
Cookies and Brownies	0.7	< 1	< 1	30.1	762	< 1	1
Cornbread and Tortillas	1.4	< 1	1	26.6	754	1	2
Crackers	0.3	< 1	< 1	20.3	451	< 1	1
Muffins and English Muffins	0.3	< 1	na	6.4	144	1	2
Pancakes and Waffles	0.4	< 1	na	8.6	189	1	2
Pastries	1.2	< 1	1	22.0	498	1	2
<u>Beverages and Beverage Bases</u>							
Bottled Water	21.6	4	14	44.6	1,101	9	20
Carbonated Fruit Drinks	5.5	1	3	22.6	549	5	11
Carbonated Soft Drinks	15.3	3	8	53.4	1,238	5	11
Energy and Sports Drinks	2.5	< 1	2	10.8	219	4	9
Fruit Drinks and Ades	4.9	1	3	24.1	585	4	8
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.6	< 1	1	11.5	305	3	5
Ready-to-Eat Breakfast Cereals	1.1	< 1	1	34.3	774	1	1
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	2.9	63	< 1	< 1
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1*	na	0.5	14	1*	1*
Commercially Prepared Egg Dishes	< 0.1	< 1*	na	< 0.1	2	2*	2*

Table B-6 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.8	1	2	34.5	855	2	4
Granola, Meal Replacement, and Breakfast Bars	0.2	< 1	na	7.7	145	< 1	1
Pasta and Noodles	2.2	< 1	1	27.8	605	2	3
<u>Hard Candy</u>							
Hard Candy	0.1	< 1	na	5.4	136	< 1	< 1
<u>Meat Products</u>							
Processed Meat	3.4	1	2	66.8	1,569	1	2
<u>Milk Products</u>							
Dietetic Milk Products	3.7	1	2	33.4	685	2	4
Milk-Based Beverages	1.0	< 1	na	7.7	219	2	5
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	4.3	1	3	36.8	895	2	5
Processed Fruits	0.7	< 1	< 1	13.7	315	1	2
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.6	< 1	na	4.1	80	3	5
<u>Snack Foods</u>							
Salty Snacks	0.9	< 1	1	34.1	688	< 1	1
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	< 1	< 1	20.4	459	< 1	1
Soft Candy	0.1	< 1	na	7.2	165	< 1	1
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.1	< 1	1	16.7	422	1	3

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table B-7 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by the Total US Population (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	21	40	99.1	8,225	21	40
<u>Alcoholic beverages</u>							
Distilled Liquors	0.4	< 1	na	6.4	400	1	2
Malted Beverages	7.0	1	3	14.6	896	8	16
Wine	1.0	< 1	na	9.0	497	2	4
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	< 1	na	6.1	457	1	1
Breads and Rolls	6.4	1	3	88.1	7,090	2	3
Cakes and Cupcakes	0.6	< 1	< 1	12.2	895	1	2
Cookies and Brownies	0.8	< 1	1	32.0	2,754	1	1
Cornbread and Tortillas	1.4	< 1	1	27.0	2,687	1	2
Crackers	0.4	< 1	< 1	26.9	2,224	< 1	1
Muffins and English Muffins	0.3	< 1	na	7.0	465	1	2
Pancakes and Waffles	0.6	< 1	1	11.9	1,036	1	3
Pastries	1.2	< 1	1	19.8	1,517	1	3
<u>Beverages and Beverage Bases</u>							
Bottled Water	23.5	5	14	47.6	4,125	10	21
Carbonated Fruit Drinks	5.6	1	4	21.8	1,901	5	10
Carbonated Soft Drinks	14.0	2	7	45.8	3,426	5	11
Energy and Sports Drinks	2.0	< 1	na	8.2	629	5	9
Fruit Drinks and Ades	5.9	1	5	28.7	2,695	5	11
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.7	< 1	1	11.7	963	3	6
Ready-to-Eat Breakfast Cereals	1.3	< 1	1	39.9	3,490	1	2
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	3.7	295	< 1	< 1
<u>Egg Products</u>							
Liquid, Frozen, or Dried Eggs	< 0.1	< 1	na	0.5	38	1	1
Commercially Prepared Egg Dishes	< 0.1	< 1*	na	< 0.1	3	2*	2*

Table B-7 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by the Total US Population (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.6	1	2	33.1	2,918	2	4
Granola, Meal Replacement, and Breakfast Bars	0.2	< 1	na	8.9	603	1	1
Pasta and Noodles	2.7	1	2	31.1	2,503	2	5
<u>Hard Candy</u>							
Hard Candy	0.1	< 1	na	7.5	663	< 1	1
<u>Meat Products</u>							
Processed Meat	3.3	1	2	61.2	4,893	1	2
<u>Milk Products</u>							
Dietetic Milk Products	5.2	1	4	37.6	2,700	3	8
Milk-Based Beverages	2.1	1	2	14.8	1,495	5	10
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	5.3	2	4	39.5	3,678	4	8
Processed Fruits	0.8	< 1	< 1	15.6	1,180	1	3
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.5	< 1	na	3.1	211	4	7
<u>Snack Foods</u>							
Salty Snacks	1.0	< 1	1	37.1	2,969	1	1
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	< 1	< 1	21.9	1,614	< 1	1
Soft Candy	0.2	< 1	< 1	12.0	1,027	1	1
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.2	< 1	1	16.9	1,622	2	3

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

APPENDIX C

Representative NHANES Food Codes for Proposed Food-Uses of Magnesium L-Threonate in the U.S. (2009-2010 NHANES Data)

Representative 2009-2010 NHANES Food Codes for Proposed Food-Uses of Magnesium L-Threonate in the U.S.

Alcoholic Beverages

Distilled Liquors

[Magnesium L-Threonate] = 0.0885%

93201000	Cordial or liqueur
93302100	Zombie
93501000	Brandy
93502000	Whiskey
93503000	Gin
93504000	Rum
93505000	Vodka

Mixed Foods Containing Distilled Liquors

Adjusted for distilled liquors content of 50 to 75%

[Magnesium L-Threonate] = 0.04425 to 0.06638%

93301085	Kamikaze
93301110	Martini
93301120	Mint julep
93301130	Old fashioned
93301240	Black Russian
93301250	White Russian
93301270	Fruit punch, alcoholic
93301280	Singapore Sling
93301290	Stinger
93301310	Mai Tai
93301320	Tequila Sunrise
93301360	Long Island iced tea
93301450	Liqueur with cream

Mixed Foods Containing Distilled Liquors

Adjusted for distilled liquors content of up to 50%

[Magnesium L-Threonate] = up to 0.04425%

93301000	Cocktail, NFS
93301010	Alexander
93301020	Bacardi cocktail
93301030	Bloody Mary
93301031	Canadian Club and soda
93301032	Cape Cod
93301040	Daiquiri
93301050	Gimlet
93301060	Gin and Tonic
93301070	Grasshopper
93301080	High ball
93301090	Manhattan
93301100	Margarita
93301115	Mimosa
93301135	Rob Roy
93301136	Rusty Nail

Intertek

93301139	Salty Dog
93301140	Screwdriver
93301141	Seabreeze
93301142	Seven and Seven
93301150	Tom Collins
93301160	Whiskey sour
93301170	Bourbon and soda
93301180	Mixed Drinks (for recipe modifications)
93301190	Rum and cola
93301200	Pina Colada
93301220	Coquito, Puerto Rican (coconut, rum)
93301230	Sloe gin fizz
93301300	Gibson
93301330	Gin Rickey
93301340	Golden Cadillac
93301370	Fuzzy Navel
93301400	Irish Coffee
93301500	Frozen daiquiri
93301510	Frozen margarita
93301550	Eggnog, alcoholic
93301600	Gin fizz
93302000	Rum, hot buttered
93504100	Rum cooler

Malted Beverages

[Magnesium L-Threonate] = 0.0885%

93101000	Beer
93102000	Beer, lite

Wine

[Magnesium L-Threonate] = 0.0885%

93401010	Wine, table, red
93401020	Wine, table, white
93401100	Wine, rice
93401300	Wine, cooking (assume cooked)
93402000	Wine, dessert, sweet
93403000	Wine, light
93404000	Wine cooler
93404500	Sangria
93404600	Sangria, Puerto Rican style
93405000	Wine spritzer
93406000	Glug

Baked Goods and Baking Mixes

Biscuits

[Magnesium L-Threonate] = 0.12%

52101020	Biscuit dough, raw
52101030	Biscuit dough, fried
52101040	Crumpet
52101050	Crumpet, toasted

52101100	Biscuit, baking powder or buttermilk type, made from mix
52101150	Biscuit, baking powder or buttermilk type, made from refrigerated dough, lowfat
52102040	Biscuit, baking powder or buttermilk type, made from refrigerated dough
52103000	Biscuit, baking powder or buttermilk type, commercially baked
52104040	Biscuit, whole wheat
52104100	Biscuit, cheese
52104200	Biscuit, cinnamon-raisin
52105100	Scone
52105110	Scone, whole wheat
52105200	Scone, with fruit

Mixed Foods Containing Biscuits

Adjusted for biscuit content of 90%

[Magnesium L-Threonate] = 0.108%

58128000	Biscuit with gravy
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Breads and Rolls

[Magnesium L-Threonate] = 0.12%

51000100	Bread, NS as to major flour
51000110	Bread, NS as to major flour, toasted
51000200	Roll, NS as to major flour
51000230	Roll, NS as to major flour, toasted
51000300	Roll, hard, NS as to major flour
51000400	Roll, bran, NS as to type of bran
51000410	Roll, bran, NS as to type of bran, toasted
51101000	Bread, white
51101010	Bread, white, toasted
51102010	Bread, white with whole wheat swirl
51102020	Bread, white with whole wheat swirl, toasted
51105010	Bread, Cuban
51105040	Bread, Cuban, toasted
51106010	Bread, Native, water, Puerto Rican style (Pan Criollo)
51106020	Bread, Native, water, Puerto Rican style, toasted (Pan Criollo)
51106200	Bread, lard, Puerto Rican style (Pan de manteca)
51106210	Bread, lard, Puerto Rican style, toasted (Pan de manteca)
51106300	Bread, caressed, Puerto Rican style (Pan sobao)
51106310	Bread, caressed, Puerto Rican style, toasted (Pan sobao)
51107010	Bread, French or Vienna
51107040	Bread, French or Vienna, toasted
51108010	Focaccia, Italian flatbread, plain
51108100	Naan, Indian flatbread
51109010	Bread, Italian, Grecian, Armenian
51109040	Bread, Italian, Grecian, Armenian, toasted
51109100	Bread, pita
51109110	Bread, pita, toasted
51109150	Bread, pita with fruit
51109200	Bread, pita with fruit, toasted
51110010	Bread, batter
51111010	Bread, cheese
51111040	Bread, cheese, toasted
51113010	Bread, cinnamon
51113100	Bread, cinnamon, toasted

51115010	Bread, cornmeal and molasses
51115020	Bread, cornmeal and molasses, toasted
51119010	Bread, egg, Challah
51119040	Bread, egg, Challah, toasted
51119100	Bread, lowfat, 98% fat free
51119110	Bread, lowfat, 98% fat free, toasted
51121010	Bread, garlic
51121040	Bread, garlic, toasted
51121110	Bread, onion
51122000	Bread, reduced calorie and/or high fiber, white or NFS
51122010	Bread, reduced calorie and/or high fiber, white or NFS, toasted
51122050	Bread, reduced calorie and/or high fiber, Italian
51122060	Bread, reduced calorie and/or high fiber, Italian, toasted
51122100	Bread, reduced calorie and/or high fiber, white or NFS, with fruit and/or nuts
51122110	Bread, reduced calorie and/or high fiber, white or NFS, with fruit and/or nuts, toasted
51122300	Bread, white, special formula, added fiber
51122310	Bread, white, special formula, added fiber, toasted
51123010	Bread, high protein
51123020	Bread, high protein, toasted
51126010	Bread, milk and honey
51126020	Bread, milk and honey, toasted
51127010	Bread, potato
51127020	Bread, potato, toasted
51129010	Bread, raisin
51129020	Bread, raisin, toasted
51130510	Bread, white, low sodium or no salt
51130520	Bread, white, low sodium or no salt, toasted
51133010	Bread, sour dough
51133020	Bread, sour dough, toasted
51134000	Bread, sweetpotato
51135000	Bread, vegetable
51135010	Bread, vegetable, toasted
51140100	Bread, dough, fried
51150000	Roll, white, soft
51150100	Roll, white, soft, toasted
51152000	Roll, white, soft, reduced calorie and/or high fiber
51152100	Roll, white, soft, reduced calorie and/or high fiber, toasted
51153000	Roll, white, hard
51153010	Roll, white, hard, toasted
51154510	Roll, diet
51154550	Roll, egg bread
51154560	Roll, egg bread, toasted
51154600	Roll, cheese
51155000	Roll, French or Vienna
51155010	Roll, French or Vienna, toasted
51156500	Roll, garlic
51157000	Roll, hoagie, submarine
51157010	Roll, hoagie, submarine, toasted
51158100	Roll, Mexican, bolillo
51159000	Roll, sour dough
51160000	Roll, sweet
51160010	Roll, sweet, toasted
51160100	Roll, sweet, cinnamon bun, no frosting
51160110	Roll, sweet, cinnamon bun, frosted

51161000	Roll, sweet, with fruit, no frosting
51161020	Roll, sweet, with fruit, frosted
51161030	Roll, sweet, with fruit, frosted, diet
51161050	Roll, sweet, with nuts, frosted
51161070	Roll, sweet, with fruit, frosted, fat free
51161100	Roll, sweet, with fruit and nuts, no frosting
51161150	Roll, sweet, with fruit and nuts, frosted
51161200	Roll, sweet, with nuts, no frosting
51161250	Roll, sweet, no topping, Mexican (Pan Dulce)
51161270	Roll, sweet, sugar topping, Mexican (Pan Dulce)
51161280	Roll, sweet, with raisins and icing, Mexican (Pan Dulce)
51166000	Croissant
51166100	Croissant, cheese
51166200	Croissant, chocolate
51166500	Croissant, fruit
51166700	Croissant, nut
51167000	Brioche
51168000	Bread, Spanish coffee
51180010	Bagel
51180020	Bagel, toasted
51180030	Bagel, with raisins
51180040	Bagel, with raisins, toasted
51180080	Bagel, with fruit other than raisins
51180090	Bagel, with fruit other than raisins, toasted
51182010	Bread stuffing
51182020	Bread stuffing made with egg
51184000	Bread sticks, hard
51184010	Bread stick, soft
51184020	Bread stick, NS as to hard or soft
51184030	Bread stick, soft, prepared with garlic and parmesan cheese
51184100	Bread stick, hard, low sodium
51185000	Croutons
51187000	Melba toast
51187020	Anisette toast
51188100	Pannetone (Italian-style sweet bread)
51188500	Zwieback toast
51201010	Bread, whole wheat, 100%
51201020	Bread, whole wheat, 100%, toasted
51201110	Bread, whole wheat, 100%, with raisins
51201120	Bread, whole wheat, 100%, with raisins, toasted
51201150	Bread, pita, whole wheat, 100%
51201160	Bread, pita, whole wheat, 100%, toasted
51204010	Bread, wheat germ
51204020	Bread, wheat germ, toasted
51207010	Bread, sprouted wheat
51207020	Bread, sprouted wheat, toasted
51208000	Bagel, whole wheat, 100%
51208010	Bagel, whole wheat, 100%, toasted
51208100	Bagel, whole wheat, 100%, with raisins
51208110	Bagel, whole wheat, 100%, with raisins, toasted
51220000	Roll, whole wheat, 100%
51220010	Roll, whole wheat, 100%, toasted
51300050	Bread, whole grain white
51300060	Bread, whole grain white, toasted

51300110	Bread, whole wheat, NS as to 100%
51300120	Bread, whole wheat, NS as to 100%, toasted
51300180	Bread, puri or poori (Indian puffed bread), wheat
51300210	Bread, whole wheat, NS as to 100%, with raisins
51300220	Bread, whole wheat, NS as to 100%, with raisins, toasted
51301010	Bread, wheat or cracked wheat
51301020	Bread, wheat or cracked wheat, toasted
51301120	Bread, wheat or cracked wheat, with raisins
51301130	Bread, wheat or cracked wheat, with raisins, toasted
51301510	Bread, wheat or cracked wheat, reduced calorie and/or high fiber
51301520	Bread, wheat or cracked wheat, reduced calorie and/or high fiber, toasted
51301600	Bread, pita, whole wheat, NS as to 100%
51301610	Bread, pita, whole wheat, NS as to 100%, toasted
51301620	Bread, pita, wheat or cracked wheat
51301630	Bread, pita, wheat or cracked wheat, toasted
51301700	Bagel, wheat
51301710	Bagel, wheat, toasted
51301750	Bagel, whole wheat, NS as to 100%
51301760	Bagel, whole wheat, NS as to 100%, toasted
51301800	Bagel, wheat, with raisins
51301810	Bagel, wheat, with raisins, toasted
51301820	Bagel, wheat, with fruit and nuts
51301830	Bagel, wheat, with fruit and nuts, toasted
51301900	Bagel, wheat bran
51301910	Bagel, wheat bran, toasted
51302010	Bread, wheat bran
51302020	Bread, wheat bran, toasted
51302050	Bread, wheat bran, with raisins
51302060	Bread, wheat bran, with raisins, toasted
51306000	Bread stick, hard, whole wheat, NS as to 100%
51320010	Roll, wheat or cracked wheat
51320020	Roll, wheat or cracked wheat, toasted
51320500	Roll, whole wheat, NS as to 100%
51320510	Roll, whole wheat, NS as to 100%, toasted
51401010	Bread, rye
51401020	Bread, rye, toasted
51401030	Bread, marble rye and pumpernickel
51401040	Bread, marble rye and pumpernickel, toasted
51401060	Bread, rye, reduced calorie and/or high fiber
51401070	Bread, rye, reduced calorie and/or high fiber, toasted
51404010	Bread, pumpernickel
51404020	Bread, pumpernickel, toasted
51404500	Bagel, pumpernickel
51404510	Bagel, pumpernickel, toasted
51407010	Bread, black
51407020	Bread, black, toasted
51420000	Roll, rye
51421000	Roll, pumpernickel
51421100	Roll, pumpernickel, toasted
51501010	Bread, oatmeal
51501020	Bread, oatmeal, toasted
51501040	Bread, oat bran
51501050	Bread, oat bran, toasted
51501060	Bread, oat bran, reduced calorie and/or high fiber

51501070	Bread, oat bran, reduced calorie and/or high fiber, toasted
51501080	Bagel, oat bran
51501090	Bagel, oat bran, toasted
51502010	Roll, oatmeal
51502020	Roll, oatmeal, toasted
51502100	Roll, oat bran
51502110	Roll, oat bran, toasted
51601010	Bread, multigrain, toasted
51601020	Bread, multigrain
51601210	Bread, multigrain, with raisins
51601220	Bread, multigrain, with raisins, toasted
51602010	Bread, multigrain, reduced calorie and/or high fiber
51602020	Bread, multigrain, reduced calorie and/or high fiber, toasted
51620000	Roll, multigrain
51620010	Roll, multigrain, toasted
51630000	Bagel, multigrain
51630010	Bagel, multigrain, toasted
51630100	Bagel, multigrain, with raisins
51630110	Bagel, multigrain, with raisins, toasted
51801010	Bread, barley
51802010	Bread, triticale
51802020	Bread, triticale, toasted
51803010	Bread, buckwheat
51803020	Bread, buckwheat, toasted
51804010	Bread, soy
51804020	Bread, soy, toasted
51805010	Bread, sunflower meal
51805020	Bread, sunflower meal, toasted
51806010	Bread, rice
51806020	Bread, rice, toasted
51807000	Injera (American-style Ethiopian bread)
51808000	Bread, low gluten
51808010	Bread, low gluten, toasted
52401000	Bread, Boston Brown
52403000	Bread, nut
52404060	Bread, pumpkin
52405010	Bread, fruit, without nuts
52405100	Bread, fruit and nut
52406010	Bread, whole wheat, with nuts
52407000	Bread, zucchini
52408000	Bread, Irish soda
58112110	Dim sum, meat filled (egg roll-type)
58112510	Dumpling, steamed, filled with meat, poultry, or seafood
58123110	Sweet bread dough, filled with meat, steamed
58123120	Sweet bread dough, filled with bean paste, meatless, steamed

Mixed Foods Containing Breads and Rolls

Adjusted for breads and rolls content of 50 to 70%

[Magnesium L-Threonate] = 0.06 to 0.084%

58106205	Pizza, cheese, prepared from frozen, thick crust
58106210	Pizza, cheese, NS as to type of crust
58106225	Pizza, cheese, regular crust
58106230	Pizza, cheese, thick crust

58106240	Pizza, extra cheese, NS as to type of crust
58106255	Pizza, extra cheese, regular crust
58106260	Pizza, extra cheese, thick crust
58106305	Pizza, cheese with vegetables, prepared from frozen, thick crust
58106310	Pizza, cheese, with vegetables, NS as to type of crust
58106325	Pizza, cheese, with vegetables, regular crust
58106330	Pizza, cheese, with vegetables, thick crust
58106340	Pizza, with cheese and extra vegetables, NS as to type of crust
58106347	Pizza with cheese and extra vegetables, regular crust
58106350	Pizza with cheese and extra vegetables, thick crust
58106357	Pizza, cheese, with fruit, NS as to type of crust
58106359	Pizza, cheese, with fruit, regular crust
58106360	Pizza, cheese, with fruit, thick crust
58106410	Pizza with chicken, NS as to type of crust
58106412	Pizza with chicken, regular crust
58106413	Pizza with chicken, thick crust
58106440	Pizza with chicken and vegetables, NS as to type of crust
58106442	Pizza with chicken and vegetables, regular crust
58106443	Pizza with chicken and vegetables, thick crust
58106460	Pizza with chicken and fruit, NS as to type of crust
58106462	Pizza with chicken and fruit, regular crust
58106463	Pizza with chicken and fruit, thick crust
58106505	Pizza with meat, prepared from frozen, thick crust
58106540	Pizza with pepperoni, NS as to type of crust
58106555	Pizza with pepperoni, regular crust
58106560	Pizza with pepperoni, thick crust
58106610	Pizza with meat other than pepperoni, NS as to type of crust
58106625	Pizza with meat other than pepperoni, regular crust
58106630	Pizza with meat other than pepperoni, thick crust
58106640	Pizza with extra meat, NS as to type of crust
58106655	Pizza with extra meat, regular crust
58106660	Pizza with extra meat, thick crust
58106705	Pizza with meat and vegetables, prepared from frozen, thick crust
58106710	Pizza with meat and vegetables, NS as to type of crust
58106725	Pizza with meat and vegetables, regular crust
58106730	Pizza with meat and vegetables, thick crust
58106734	Pizza with extra meat and extra vegetables, prepared from frozen, thick crust
58106735	Pizza with extra meat and extra vegetables, NS as to type of crust
58106737	Pizza with extra meat and extra vegetables, thick crust
58106738	Pizza with extra meat and extra vegetables, regular crust
58106740	Pizza with meat and fruit, NS as to type of crust
58106755	Pizza with meat and fruit, regular crust
58106760	Pizza with meat and fruit, thick crust
58106780	Pizza with meat and vegetables, prepared from frozen, lowfat, thin crust
58106810	Pizza with beans and vegetables, NS as to type of crust
58106825	Pizza with beans and vegetables, regular crust
58106830	Pizza with beans and vegetables, thick crust
58106900	Pizza with seafood, NS as to type of crust
58106915	Pizza with seafood, regular crust
58106920	Pizza with seafood, thick crust
58107030	Pizza, no cheese, NS as to type of crust
58107060	Pizza, no cheese, regular crust
58107100	Pizza, no cheese, thick crust
58107210	White pizza, NS as to type of crust

58107225	White pizza, regular crust
58107230	White pizza, thick crust
58108000	Calzone, with cheese, meatless
58108010	Calzone, with meat and cheese
58108030	Panzerotti, with meat, vegetables, and cheese
58108040	Panzerotti, with vegetables and cheese
58108050	Pizza rolls
58310210	Sausage and french toast (frozen meal)
58310310	Pancakes and sausage (frozen meal)
58310410	Sausage rice links and whole wheat pancakes (frozen meal)

Mixed Foods Containing Breads and Rolls

Adjusted for breads and rolls content of 20 to 40%

[Magnesium L-Threonate] = 0.024 to 0.048%

27500050	Sandwich, NFS
27500100	Meat sandwich, NFS
27500200	Wrap sandwich, filled with meat, poultry, or fish, vegetables, and cheese
27500300	Wrap sandwich, filled with meat, poultry, or fish, and vegetables
27510000	Beef sandwich, NFS
27510110	Beef barbecue sandwich or Sloppy Joe, on bun
27510130	Beef barbecue submarine sandwich, on bun
27510210	Cheeseburger, plain, on bun
27510220	Cheeseburger, with mayonnaise or salad dressing, on bun
27510230	Cheeseburger, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510240	Cheeseburger, 1/4 lb meat, plain, on bun
27510250	Cheeseburger, 1/4 lb meat, with mayonnaise or salad dressing, on bun
27510260	Cheeseburger, 1/4 lb meat, with mushrooms in sauce, on bun
27510270	Double cheeseburger (2 patties), plain, on bun
27510280	Double cheeseburger (2 patties), with mayonnaise or salad dressing, on bun
27510290	Double cheeseburger (2 patties), plain, on double-decker bun
27510300	Double cheeseburger (2 patties), with mayonnaise or salad dressing, on double-decker bun
27510310	Cheeseburger with tomato and/or catsup, on bun
27510311	Cheeseburger, 1 oz meat, plain, on miniature bun
27510320	Cheeseburger, 1/4 lb meat, with tomato and/or catsup, on bun
27510330	Double cheeseburger (2 patties), with tomato and/or catsup, on bun
27510340	Double cheeseburger (2 patties), with mayonnaise or salad dressing and tomatoes, on bun
27510350	Cheeseburger, 1/4 lb meat, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510355	Cheeseburger, 1/3 lb meat, with mayonnaise or salad dressing, tomato and/or catsup on bun
27510360	Bacon cheeseburger, with mayonnaise or salad dressing, tomato and/or catsup, on bun
27510370	Double cheeseburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing, on bun
27510375	Double cheeseburger (2 patties, 1/4 lb meat each), with tomato and/or catsup, on bun
27510380	Triple cheeseburger (3 patties, 1/4 lb meat each), with mayonnaise or salad dressing and tomatoes, on bun
27510390	Double bacon cheeseburger (2 patties, 1/4 lb meat each), on bun
27510400	Bacon cheeseburger, 1/4 lb meat, with tomato and/or catsup, on bun
27510410	Chiliburger, on bun
27510420	Taco burger, on bun

27510425	Double bacon cheeseburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing, on bun
27510430	Double bacon cheeseburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510435	Double bacon cheeseburger (2 patties, 1/3 lb meat each), with mayonnaise or salad dressing, on bun
27510440	Bacon cheeseburger, 1/4 lb meat, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510450	Cheeseburger, 1/4 lb meat, with ham, on bun
27510480	Cheeseburger (hamburger with cheese sauce), 1/4 lb meat, with grilled onions, on rye bun
27510500	Hamburger, plain, on bun
27510510	Hamburger, with tomato and/or catsup, on bun
27510520	Hamburger, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510530	Hamburger, 1/4 lb meat, plain, on bun
27510540	Double hamburger (2 patties), with tomato and/or catsup, on bun
27510550	Double hamburger (2 patties), with mayonnaise or salad dressing and tomatoes, on double-decker bun
27510560	Hamburger, 1/4 lb meat, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510570	Hamburger, 2-1/2 oz meat, with mayonnaise or salad dressing and tomatoes, on bun
27510590	Hamburger, with mayonnaise or salad dressing, on bun
27510600	Hamburger, 1 oz meat, plain, on miniature bun
27510610	Hamburger, 1 oz meat, with tomato and/or catsup, on miniature bun
27510620	Hamburger, 1/4 lb meat, with tomato and/or catsup, on bun
27510630	Hamburger, 1/4 lb meat, with mayonnaise or salad dressing, on bun
27510650	Double hamburger (2 patties), plain, on bun
27510660	Double hamburger (2 patties), with mayonnaise or salad dressing, on bun
27510670	Double hamburger (2 patties), with mayonnaise or salad dressing and tomatoes, on bun
27510680	Double hamburger (2 patties, 1/4 lb meat each), with tomato and/or catsup, on bun
27510690	Double hamburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing and tomatoes and/or catsup, on double-decker bun
27510700	Meatball and spaghetti sauce submarine sandwich
27510710	Pizzaburger (hamburger, cheese, sauce) on 1/2 bun
27510720	Pizzaburger (hamburger, cheese, sauce) on whole bun
27510910	Corned beef sandwich
27510950	Reuben sandwich (corned beef sandwich with sauerkraut and cheese), with spread
27511010	Pastrami sandwich
27513010	Roast beef sandwich
27513020	Roast beef sandwich, with gravy
27513030	Roast beef sandwich dipped in egg, fried, with gravy and spread
27513040	Roast beef submarine sandwich, with lettuce, tomato and spread
27513041	Roast beef submarine sandwich, with cheese, lettuce, tomato and spread
27513050	Roast beef sandwich with cheese
27513060	Roast beef sandwich with bacon and cheese sauce
27513070	Roast beef submarine sandwich, on roll, au jus
27515000	Steak submarine sandwich with lettuce and tomato
27515010	Steak sandwich, plain, on roll
27515020	Steak and cheese submarine sandwich, with lettuce and tomato
27515030	Steak and cheese sandwich, plain, on roll
27515040	Steak and cheese submarine sandwich, plain, on roll
27515050	Fajita-style beef sandwich with cheese, on pita bread, with lettuce and tomato
27515070	Steak and cheese submarine sandwich, with fried peppers and onions, on roll
27515080	Steak sandwich, plain, on biscuit

27516010	Gyro sandwich (pita bread, beef, lamb, onion, condiments), with tomato and spread
27520110	Bacon sandwich, with spread
27520120	Bacon and cheese sandwich, with spread
27520130	Bacon, chicken, and tomato club sandwich, with lettuce and spread
27520135	Bacon, chicken, and tomato club sandwich, with cheese, lettuce and spread
27520140	Bacon and egg sandwich
27520150	Bacon, lettuce, and tomato sandwich with spread
27520160	Bacon, chicken, and tomato club sandwich, on multigrain roll with lettuce and spread
27520165	Bacon, chicken fillet (breaded, fried), and tomato club with lettuce and spread
27520166	Bacon, chicken fillet (breaded, fried), and tomato club sandwich with cheese, lettuce and spread
27520170	Bacon on biscuit
27520250	Ham on biscuit
27520300	Ham sandwich, with spread
27520310	Ham sandwich with lettuce and spread
27520320	Ham and cheese sandwich, with lettuce and spread
27520330	Ham and egg sandwich
27520340	Ham salad sandwich
27520350	Ham and cheese sandwich, with spread, grilled
27520360	Ham and cheese sandwich, on bun, with lettuce and spread
27520370	Hot ham and cheese sandwich, on bun
27520380	Ham and cheese on English muffin
27520390	Ham and cheese submarine sandwich, with lettuce, tomato and spread
27520410	Cuban sandwich, (Sandwich cubano), with spread
27520420	Midnight sandwich, (Media noche), with spread
27520500	Pork sandwich, on white roll, with onions, dill pickles and barbecue sauce
27520510	Pork barbecue sandwich or Sloppy Joe, on bun
27520520	Pork sandwich
27520530	Pork sandwich, with gravy
27520540	Ham and tomato club sandwich, with lettuce and spread
27540110	Chicken sandwich, with spread
27540111	Chicken sandwich, with cheese and spread
27540120	Chicken salad or chicken spread sandwich
27540130	Chicken barbecue sandwich
27540140	Chicken fillet (breaded, fried) sandwich
27540145	Chicken fillet (breaded, fried) sandwich on biscuit
27540150	Chicken fillet (breaded, fried) sandwich with lettuce, tomato and spread
27540151	Chicken fillet (breaded, fried) sandwich with cheese, lettuce, tomato and spread
27540170	Chicken patty sandwich, miniature, with spread
27540180	Chicken patty sandwich or biscuit
27540190	Chicken patty sandwich, with lettuce and spread
27540200	Fajita-style chicken sandwich with cheese, on pita bread, with lettuce and tomato
27540210	Wrap sandwich filled with chicken strips (breaded, fried), cheese, lettuce, and spread
27540230	Chicken patty sandwich with cheese, on wheat bun, with lettuce, tomato and spread
27540235	Chicken fillet, broiled, sandwich with lettuce, tomato, and spread
27540240	Chicken fillet, (broiled), sandwich, on whole wheat roll, with lettuce, tomato and spread
27540250	Chicken fillet, broiled, sandwich with cheese, on whole wheat roll, with lettuce, tomato and non-mayonnaise type spread
27540260	Chicken fillet, broiled, sandwich, on oat bran bun, with lettuce, tomato, spread
27540270	Chicken fillet, broiled, sandwich, with lettuce, tomato, and non-mayonnaise type spread
27540280	Chicken fillet, broiled, sandwich with cheese, on bun, with lettuce, tomato and spread
27540290	Chicken submarine sandwich, with lettuce, tomato, and spread
27540291	Chicken submarine sandwich, with cheese, lettuce, tomato, and spread
27540300	Wrap sandwich filled with chicken strips (broiled), cheese, lettuce, and spread

27540310	Turkey sandwich, with spread
27540320	Turkey salad or turkey spread sandwich
27540330	Turkey sandwich, with gravy
27540350	Turkey submarine sandwich, with cheese, lettuce, tomato and spread
27541000	Turkey, ham, and roast beef club sandwich, with lettuce, tomato and spread
27541001	Turkey, ham, and roast beef club sandwich with cheese, lettuce, tomato, and spread
27550000	Fish sandwich, on bun, with spread
27550100	Fish sandwich, on bun, with cheese and spread
27550110	Crab cake sandwich, on bun
27550510	Sardine sandwich, with lettuce and spread
27550710	Tuna salad sandwich, with lettuce
27550720	Tuna salad sandwich
27550730	Tuna melt sandwich
27550750	Tuna salad submarine sandwich, with lettuce and tomato
27550751	Tuna salad submarine sandwich, with cheese, lettuce and tomato
27560000	Luncheon meat sandwich, NFS, with spread
27560110	Bologna sandwich, with spread
27560120	Bologna and cheese sandwich, with spread
27560300	Corn dog (frankfurter or hot dog with cornbread coating)
27560310	Corny dog, with chili, on bun
27560320	Frankfurter or hot dog, plain, on bun
27560330	Frankfurter or hot dog, with cheese, plain, on bun
27560340	Frankfurter or hot dog, with catsup and/or mustard, on bun
27560350	Pig in a blanket (frankfurter or hot dog wrapped in dough)
27560360	Frankfurter or hot dog, with chili, on bun
27560370	Frankfurter or hot dog with chili and cheese, on bun
27560380	Pochito (frankfurter or hot dog and beef chili wrapped in tortilla)
27560400	Chicken frankfurter or hot dog, plain, on bun
27560410	Puerto Rican sandwich (Sandwich criollo)
27560510	Salami sandwich, with spread
27560650	Sausage on biscuit
27560660	Sausage griddle cake sandwich
27560670	Sausage and cheese on English muffin
27560700	Sausage on biscuit, diet
27560705	Sausage balls (made with biscuit mix and cheese)
27560710	Sausage sandwich
27560720	Sausage and spaghetti sauce sandwich
27560910	Cold cut submarine sandwich, with cheese, lettuce, tomato, and spread
27563010	Meat spread or potted meat sandwich
27570310	Hors d'oeuvres, with spread
58106200	Pizza, cheese, prepared from frozen, thin crust
58106220	Pizza, cheese, thin crust
58106250	Pizza, extra cheese, thin crust
58106300	Pizza, cheese, with vegetables, prepared from frozen, thin crust
58106320	Pizza, cheese, with vegetables, thin crust
58106345	Pizza with cheese and extra vegetables, thin crust
58106358	Pizza, cheese, with fruit, thin crust
58106411	Pizza with chicken, thin crust
58106441	Pizza with chicken and vegetables, thin crust
58106461	Pizza with chicken and fruit, thin crust
58106500	Pizza with meat, prepared from frozen, thin crust
58106550	Pizza with pepperoni, thin crust
58106620	Pizza with meat other than pepperoni, thin crust
58106650	Pizza with extra meat, thin crust

58106700	Pizza with meat and vegetables, prepared from frozen, thin crust
58106720	Pizza with meat and vegetables, thin crust
58106733	Pizza with extra meat and extra vegetables, prepared from frozen, thin crust
58106736	Pizza with extra meat and extra vegetables, thin crust
58106750	Pizza with meat and fruit, thin crust
58106820	Pizza with beans and vegetables, thin crust
58106910	Pizza with seafood, thin crust
58107050	Pizza, no cheese, thin crust
58107220	White pizza, thin crust
58127200	Croissant sandwich, filled with broccoli and cheese
58127210	Croissant sandwich, filled with ham and cheese
58127220	Croissant sandwich, filled with chicken, broccoli, and cheese sauce
58127270	Croissant sandwich with sausage and egg
58127290	Croissant sandwich with bacon and egg
58127310	Croissant sandwich with ham, egg, and cheese
58127330	Croissant sandwich with sausage, egg, and cheese
58127350	Croissant sandwich with bacon, egg, and cheese
58128210	Dressing with oysters
58128220	Dressing with chicken or turkey and vegetables
58128250	Dressing with meat and vegetables
58200100	Wrap sandwich, filled with meat, poultry, or fish, vegetables, and rice
58200200	Wrap sandwich, filled with vegetables and rice
58200250	Wrap sandwich, filled with vegetables
58200300	Wrap sandwich, filled with meat, poultry, or fish, vegetables, rice, and cheese

Cakes and Cupcakes

[Magnesium L-Threonate] = 0.12%

51165000	Coffee cake, yeast type
51165100	Coffee cake, yeast type, fat free, cholesterol free, with fruit
53100050	Cake batter, raw, chocolate
53100070	Cake batter, raw, not chocolate
53100100	Cake, NS as to type, with or without icing
53101000	Cake, angel food, NS as to icing
53101100	Cake, angel food, without icing
53101200	Cake, angel food, with icing
53101250	Cake, angel food, with fruit and icing or filling
53101300	Cake, angel food, chocolate, without icing
53102000	Cake, applesauce, NS as to icing
53102100	Cake, applesauce, without icing
53102200	Cake, applesauce, with icing
53102300	Cake, applesauce, diet, without icing
53102500	Cake, banana, NS as to icing
53102600	Cake, banana, without icing
53102700	Cake, banana, with icing
53102800	Cake, black forest (chocolate-cherry)
53103000	Cake, Boston cream pie
53103500	Cake, butter, NS as to icing
53103550	Cake, butter, without icing
53103600	Cake, butter, with icing
53104000	Cake, carrot, NS as to icing
53104100	Cake, carrot, without icing
53104260	Cake, carrot, with icing
53104300	Cake, carrot, diet

53104400	Cake, coconut, with icing
53104500	Cheesecake
53104520	Cheesecake, diet
53104550	Cheesecake with fruit
53104570	Cheesecake, diet, with fruit
53104580	Cheesecake -type dessert, made with yogurt, with fruit
53104600	Cheesecake, chocolate
53104650	Cheesecake, chocolate, reduced fat
53104900	Cake, chocolate, made with mayonnaise or salad dressing, NS as to icing
53104920	Cake, chocolate, made with mayonnaise or salad dressing, without icing or filling
53104950	Cake, chocolate, made with mayonnaise or salad dressing, with icing, coating, or filling
53105000	Cake, chocolate, devil's food, or fudge, standard-type mix (eggs and water added to dry mix), NS as to icing
53105100	Cake, chocolate, devil's food, or fudge, standard-type mix (eggs and water added to dry mix), without icing or filling
53105200	Cake, chocolate, devil's food, or fudge, standard-type mix (eggs and water added to dry mix), with icing, coating, or filling
53105300	Cake, German chocolate, with icing and filling
53105500	Cake, chocolate, with icing, diet
53105600	Cake, chocolate, devil's food, or fudge, pudding-type mix, made by "Lite" recipe (eggs and water added to dry mix, no oil added)
53105650	Cake, chocolate, devil's food, or fudge, pudding type mix, made by "cholesterol free" recipe (water, oil and egg whites added)
53105700	Cake, chocolate, devil's food, or fudge, pudding type mix, made by "cholesterol free" recipe (water, oil and egg whites added)
53105750	Cake, chocolate, devil's food, or fudge, pudding type mix, made by "cholesterol free" recipe (water, oil and egg whites added)
53105900	Cake, chocolate, devil's food, or fudge, pudding-type mix (oil, eggs, and water added to dry mix), NS as to icing
53106000	Cake, chocolate, devil's food, or fudge, pudding-type mix (oil, eggs, and water added to dry mix), without icing or filling
53106050	Cake, chocolate, devil's food, or fudge, pudding-type mix (oil, eggs, and water added to dry mix), with icing, coating, or filling
53106100	Cake, Poor Man's (spice-type), without icing
53106500	Cake, cream, without icing or topping
53107000	Cake, cupcake, NS as to type or icing
53107100	Cake, cupcake, NS as to type, without icing
53107200	Cake, cupcake, NS as to type, with icing
53108000	Cake, cupcake, chocolate, NS as to icing
53108100	Cake, cupcake, chocolate, without icing or filling
53108200	Cake, cupcake, chocolate, with icing or filling
53109000	Cake, cupcake, not chocolate, NS as to icing
53109100	Cake, cupcake, not chocolate, without icing or filling
53109200	Cake, cupcake, not chocolate, with icing or filling
53109210	Cake, cupcake, not chocolate, with icing or filling, lowfat, cholesterol free
53109250	Cake, cupcake, not chocolate, with fruit and cream filling
53109270	Cake, cupcake, chocolate, with or without icing, fruit filling or cream filling, lowfat, cholesterol free
53109300	Cake, Dobos Torte (non-chocolate layer cake with chocolate filling and icing)
53110000	Cake, fruit cake, light or dark, holiday type cake
53110100	Cake, plum pudding
53111000	Cake, gingerbread, without icing
53111500	Cake, graham cracker, without icing
53112000	Cake, ice cream and cake roll, chocolate

53112100	Cake, ice cream and cake roll, not chocolate
53112150	Cake, frozen yogurt and cake layer, not chocolate, with icing
53112160	Cake, frozen yogurt and cake layer, chocolate, with icing
53112500	Cake, ice box with fruit and whipped cream
53113000	Cake, jelly roll
53113950	Cake, lemon, NS as to icing
53114000	Cake, lemon, without icing
53114100	Cake, lemon, with icing
53114150	Cake, lemon, lowfat, NS as to icing
53114200	Cake, lemon, lowfat, without icing
53114250	Cake, lemon, lowfat, with icing
53115000	Cake, marble, NS as to icing
53115100	Cake, marble, without icing
53115200	Cake, marble, with icing
53115300	Cake, nut, NS as to icing
53115310	Cake, nut, without icing
53115320	Cake, nut, with icing
53115400	Cake, oatmeal, without icing
53115410	Cake, oatmeal, with icing
53115450	Cake, peanut butter, with icing
53115500	Cake, pineapple, fat free, cholesterol free, without icing
53115600	Cake, poppyseed, without icing
53116000	Cake, pound, without icing
53116020	Cake, pound, with icing
53116270	Cake, pound, chocolate
53116280	Cake, pound, chocolate, fat free, cholesterol free
53116350	Cake, pound, Puerto Rican style (Ponque)
53116380	Cake, pound, fat free, cholesterol free
53116390	Cake, pound, reduced fat, cholesterol free
53116490	Cake, pumpkin, NS as to icing
53116500	Cake, pumpkin, without icing
53116510	Cake, pumpkin, with icing
53116550	Cake, raisin-nut, without icing
53116560	Cake, raisin-nut, with icing
53116570	Cake, Ravani (made with farina)
53116600	Cake, rice flour, without icing
53116650	Cake, Quezadilla, El Salvadorian style
53116750	Cake, soy flour, without icing
53117000	Cake, spice, NS as to icing
53117100	Cake, spice, without icing
53117200	Cake, spice, with icing
53118000	Cake, sponge, NS as to icing
53118100	Cake, sponge, without icing
53118200	Cake, sponge, with icing
53118300	Cake, sponge, chocolate, without icing
53118310	Cake, sponge, chocolate, with icing
53118350	Cake, sweetpotato, with icing
53118410	Cake, rum flavored, without icing (Sopa Borracha)
53118500	Cake, torte
53118550	Cake, tres leche
53118600	Cake, chiffon, NS as to icing
53118700	Cake, chiffon, without icing
53118800	Cake, chiffon, with icing
53118900	Cake, chiffon, chocolate, without icing

53118950	Cake, chiffon, chocolate, with icing
53119000	Cake, upside down (all fruits)
53120000	Cake, white, standard-type mix (egg whites and water added), NS as to icing
53120100	Cake, white, standard-type mix (egg whites and water added to mix), without icing
53120200	Cake, white, standard-type mix (egg whites and water added to mix), with icing
53120300	Cake, white, pudding-type mix (oil, egg whites, and water added to dry mix), NS as to icing
53120330	Cake, white, pudding-type mix (oil, egg whites, and water added to dry mix), without icing
53120350	Cake, white, pudding-type mix (oil, egg whites, and water added to dry mix), with icing
53120400	Cake, white, eggless, lowfat
53120500	Cake, whole wheat, with fruit and nuts, without icing
53121000	Cake, yellow, standard-type mix (eggs and water added to dry mix), NS as to icing
53121100	Cake, yellow, standard-type mix (eggs and water added to dry mix), without icing
53121200	Cake, yellow, standard-type mix (eggs and water added to dry mix), with icing
53121280	Cake, yellow, pudding-type mix (oil, eggs, and water added to dry mix), NS as to icing
53121300	Cake, yellow, pudding-type mix (oil, eggs, and water added to dry mix), without icing
53121330	Cake, yellow, pudding-type mix (oil, eggs, and water added to dry mix), with icing
53122070	Cake, shortcake, biscuit type, with whipped cream and fruit
53122080	Cake, shortcake, biscuit type, with fruit
53123070	Cake, shortcake, sponge type, with whipped cream and fruit
53123080	Cake, shortcake, sponge type, with fruit
53123500	Cake, shortcake, with whipped topping and fruit, diet
53124100	Cake, zucchini, NS as to icing
53124110	Cake, zucchini, without icing
53124120	Cake, zucchini, with icing
53610000	Coffee cake, NFS
53610100	Coffee cake, crumb or quick-bread type
53610120	Coffee cake, crumb or quick-bread type, reduced fat, cholesterol free
53610170	Coffee cake, crumb or quick-bread type, with fruit
53610200	Coffee cake, crumb or quick-bread type, cheese-filled
53610250	Coffee cake, crumb or quick-bread type, custard filled
55801000	Funnel cake

Cookies and Brownies

[Magnesium L-Threonate] = 0.12%

53200100	Cookie, batter or dough, raw, not chocolate
53201000	Cookie, NFS
53202000	Cookie, almond
53203000	Cookie, applesauce
53203500	Cookie, biscotti (Italian sugar cookie)
53204000	Cookie, brownie, NS as to icing
53204010	Cookie, brownie, without icing
53204100	Cookie, brownie, with icing
53204500	Cookie, brownie, with cream cheese filling, without icing
53204600	Cookie, brownie, with peanut butter fudge icing
53204800	Cookie, brownie, diet, NS as to icing
53204830	Cookie, brownie, lowfat, with icing
53204840	Cookie, brownie, lowfat, without icing
53204850	Cookie, brownie, fat free, cholesterol free, with icing
53204860	Cookie, brownie, fat free, without icing
53205250	Cookie, butterscotch, brownie
53205500	Cookie, butterscotch chip
53205600	Cookie, caramel coated, with nuts

53205750	Cookie, carob
53205760	Cookie, carob and honey brownie
53206000	Cookie, chocolate chip
53206010	Cookie, chocolate chip, with raisins
53206030	Cookie, chocolate chip, reduced fat
53206050	Cookie, rich, chocolate chip, with chocolate filling
53206100	Cookie, chocolate chip sandwich
53206500	Cookie, chocolate, made with rice cereal
53206550	Cookie, chocolate, made with oatmeal and coconut (no-bake)
53207000	Cookie, chocolate fudge, with/without nuts
53207050	Cookie, chocolate, with chocolate filling or coating, fat free
53208000	Cookie, chocolate-covered marshmallow
53208200	Cookie, marshmallow pie, chocolate covered
53209000	Cookie, chocolate, chocolate sandwich or chocolate-coated or striped
53209010	Cookie, chocolate-covered, sugar wafer, creme- or caramel-filled
53209020	Cookie, chocolate sandwich, reduced fat
53209050	Cookie, chocolate-covered, chocolate sandwich
53209100	Cookie, chocolate, sandwich, with extra filling
53209500	Cookie, chocolate and vanilla sandwich
53210000	Cookie, chocolate wafer
53210900	Cookie, graham cracker sandwich with chocolate and marshmallow filling
53210910	Cookie, graham cracker with marshmallow
53211000	Cookie bar, with chocolate, nuts, and graham crackers
53215500	Cookie, coconut
53216000	Cookie, coconut and nut
53220000	Cookie, fruit-filled bar
53220010	Cookie, fruit-filled bar, fat free
53220020	Cookie, date bar
53220030	Cookie, fig bar
53220040	Cookie, fig bar, fat free
53222010	Cookie, fortune
53222020	Cookie, cone shell, ice cream type, wafer or cake
53222100	Cookie, cone shell, ice cream type, brown sugar
53223000	Cookie, gingersnaps
53223100	Cookie, granola
53224000	Cookie, ladyfinger
53224250	Cookie, lemon bar
53225000	Cookie, macaroon, coconut-meringue type, no flour
53226000	Cookie, marshmallow, with coconut
53226500	Cookie, marshmallow, with rice cereal (no-bake)
53226550	Cookie, marshmallow, with rice cereal and chocolate chips
53226600	Cookie, marshmallow and peanut butter, with oat cereal (no-bake)
53227000	Cookie, marshmallow pies, non-chocolate coating
53228000	Cookie, meringue
53230000	Cookie, molasses
53231000	Cookie, Lebkuchen
53231400	Cookie, multigrain, high fiber
53233000	Cookie, oatmeal
53233010	Cookie, oatmeal, with raisins
53233020	Cookie, oatmeal, with fruit filling
53233030	Cookie, oatmeal, fat free, with raisins
53233040	Cookie, oatmeal, reduced fat, with raisins
53233050	Cookie, oatmeal sandwich, with creme filling
53233060	Cookie, oatmeal, with chocolate chips

53233080	Cookie, oatmeal sandwich, with peanut butter and jelly filling
53233100	Cookie, oatmeal, with chocolate and peanut butter (no-bake)
53233500	Cookie, oat bran
53234000	Cookie, peanut butter
53234010	Cookie, peanut butter, with oatmeal
53234100	Cookie, peanut butter, with chocolate
53234250	Cookie, peanut butter with rice cereal (no-bake)
53235000	Cookie, peanut
53235500	Cookie, with peanut butter filling, chocolate-coated
53235600	Cookie, Pfeffernusse
53236000	Cookie, pizzelle (Italian style wafer)
53236100	Cookie, pumpkin
53237000	Cookie, raisin
53237010	Cookie, raisin sandwich, cream-filled
53237500	Cookie, rum ball (no-bake)
53238000	Cookie, sandwich-type, not chocolate or vanilla
53239000	Cookie, shortbread
53239010	Cookie, shortbread, reduced fat
53239050	Cookie, shortbread, with chocolate filling
53241500	Cookie, butter or sugar cookie
53241600	Cookie, butter or sugar cookie, with fruit and/or nuts
53242000	Cookie, sugar wafer
53242500	Cookie, toffee bar
53243000	Cookie, vanilla sandwich
53243050	Cookie, vanilla sandwich, reduced fat
53243100	Cookie, rich, all chocolate, with chocolate filling or chocolate chips
53244010	Cookie, butter or sugar, with chocolate icing or filling
53244020	Cookie, butter or sugar, with icing or filling other than chocolate
53245000	Cookie, vanilla waffle creme
53246000	Cookie, tea, Japanese
53247000	Cookie, vanilla wafer
53247050	Cookie, vanilla wafer, reduced fat
53247500	Cookie, vanilla with caramel, coconut, and chocolate coating
53248000	Cookie, whole wheat, dried fruit, nut
53251100	Cookie, rugelach
53260030	Cookie, dietetic, chocolate chip
53260150	Cookie, lemon wafer, lowfat
53260200	Cookie, dietetic, oatmeal with raisins
53260300	Cookie, dietetic, sandwich type
53260400	Cookie, dietetic, sugar or plain
53270100	Cookies, Puerto Rican (Mantecaditos polvorones)

Cornbread and Tortillas

[Magnesium L-Threonate] = 0.12%

52201000	Cornbread, prepared from mix
52204000	Cornbread stuffing
52206010	Cornbread muffin, stick, round
52207010	Corn flour patty or tart, fried
52208010	Corn pone, baked
52208020	Corn pone, fried
52208750	Gordita/sope shell, plain, no filling, grilled, no fat added
52208760	Gordita/sope shell, plain, no filling, fried in oil
52209010	Hush puppy

52211010	Johnnycake
52213010	Spoonbread
52215000	Tortilla, NFS
52215100	Tortilla, corn
52215200	Tortilla, flour (wheat)
52215260	Tortilla, whole wheat
52215300	Taco shell, corn
52215350	Taco shell, flour
52220110	Cornmeal bread, Dominican style (Arepa Dominicana)
58101910	Taco or tostada salad with beef and cheese, corn chips
58101930	Taco or tostada salad with beef, beans and cheese, fried flour tortilla
58101940	Taco or tostada salad, meatless, with cheese, fried flour tortilla
58103120	Tamale with meat
58103130	Tamale with chicken
58103200	Tamale, plain, meatless, no sauce, Puerto Rican style or Caribbean Style
58103210	Tamale, meatless, with sauce, Puerto Rican or Caribbean style
58103250	Tamale, plain, meatless, no sauce, Mexican style
58103310	Tamale casserole with meat
58117110	Cornmeal fritter, Puerto Rican style (Arepa; P.R. arepita)
58117210	Cornmeal stick, Puerto Rican style (Sorullos / Sorullitos de maiz)
58128110	Chicken cornbread
58306010	Beef enchilada dinner, NFS (frozen meal)
58306020	Beef enchilada, chili gravy, rice, refried beans (frozen meal)
58306070	Cheese enchilada (frozen meal)
58306100	Chicken enchilada (diet frozen meal)
58306150	Chicken enchilada with salsa, rice, vegetable, and dessert (diet frozen meal)
58306200	Chicken fajitas (diet frozen meal)
58306500	Chicken burritos (diet frozen meal)

Mixed Foods containing Cornbread and Tortillas

Adjusted for cornbread and tortilla content of up to 40%

[Magnesium L-Threonate] = up to 0.048%

58100100	Burrito with beef, no beans
58100110	Burrito with beef and beans
58100120	Burrito with beef, beans, and cheese
58100130	Burrito with beef and cheese, no beans
58100140	Burrito with beef, beans, cheese, and sour cream
58100150	Burrito with beef and potato, no beans
58100155	Burrito with beef, rice, and cheese
58100160	Burrito with beef, beans, rice, and cheese
58100180	Burrito with pork and beans
58100200	Burrito with chicken, no beans
58100210	Burrito with chicken and beans
58100220	Burrito with chicken, beans, and cheese
58100230	Burrito with chicken and cheese
58100240	Burrito with chicken, NFS
58100245	Burrito with chicken, beans, cheese, and sour cream
58100250	Burrito with chicken, rice, and cheese
58100255	Burrito with chicken, beans, rice, and cheese
58100300	Burrito with beans and rice, meatless
58100310	Burrito with beans, meatless
58100320	Burrito with beans and cheese, meatless
58100330	Burrito with rice, beans, cheese, sour cream, lettuce, tomato and guacamole, meatless

58100340	Burrito with eggs, sausage, cheese and vegetables
58100350	Burrito with eggs and cheese, no beans
58100360	Chilaquiles, tortilla casserole with salsa, cheese, and egg
58100370	Chilaquiles, tortilla casserole with salsa and cheese, no egg
58100400	Enchilada with beef, no beans
58100410	Burrito with beef, cheese, and sour cream
58100510	Enchilada with beef and beans
58100520	Enchilada with beef, beans, and cheese
58100530	Enchilada with beef and cheese, no beans
58100560	Enchilada with ham and cheese, no beans
58100600	Enchilada with chicken, tomato-based sauce
58100610	Enchilada with chicken and beans, tomato-based sauce
58100620	Enchilada with chicken, beans, and cheese, tomato-based sauce
58100630	Enchilada with chicken and cheese, no beans, tomato-based sauce
58100710	Enchilada with beans, meatless
58100720	Enchilada with beans and cheese, meatless
58100800	Enchilada with cheese, meatless, no beans
58100900	Enchilada with seafood, tomato-based sauce
58101300	Taco or tostada with beef, cheese and lettuce
58101310	Taco or tostada with beef, lettuce, tomato and salsa
58101320	Taco or tostada with beef, cheese, lettuce, tomato and salsa
58101350	Soft taco with beef, cheese, lettuce, tomato and sour cream
58101400	Soft taco with beef, cheese, and lettuce
58101450	Soft taco with chicken, cheese, and lettuce
58101460	Soft taco with chicken, cheese, lettuce, tomato and sour cream
58101510	Taco or tostada with chicken or turkey, lettuce, tomato and salsa
58101520	Taco or tostada with chicken, cheese, lettuce, tomato and salsa
58101530	Soft taco with beef, cheese, lettuce, tomato and salsa
58101540	Taco or tostada with fish, lettuce, tomato, salsa
58101600	Soft taco with bean, cheese, and lettuce
58101610	Soft taco with bean, cheese, lettuce, and tomato and/or salsa
58101615	Soft taco with bean, cheese, lettuce, tomato and/or salsa, and sour cream
58101710	Taco or tostada with beans, meatless, with lettuce, tomato and salsa
58101720	Taco or tostada with beans and cheese, meatless, with lettuce, tomato and salsa
58101730	Taco or tostada with beans, cheese, meat, lettuce, tomato and salsa
58101740	Soft taco with egg and potato
58101741	Soft taco with egg, potato, and cheese
58101742	Soft taco with egg, potato, cheese, tomato and/or salsa
58104260	Chalupa with beans, cheese, lettuce and tomato
58104280	Chalupa with beef, cheese, lettuce, tomato and sour cream
58104290	Chalupa with beef, cheese, lettuce, tomato and salsa
58104310	Chalupa with beans, chicken, cheese, lettuce and tomato
58104320	Chalupa with chicken, cheese, lettuce, tomato and sour cream
58104340	Chalupa with chicken, cheese, lettuce, tomato and salsa
58104450	Chimichanga with beef and tomato
58104490	Chimichanga, NFS
58104500	Chimichanga with beef, beans, lettuce and tomato
58104510	Chimichanga with beef, cheese, lettuce and tomato
58104520	Chimichanga with beans and cheese, meatless, with lettuce and tomato
58104530	Chimichanga with chicken and cheese
58104550	Chimichanga with chicken, sour cream, lettuce and tomato, no cheese
58104600	Chimichanga with beef and rice
58104710	Quesadilla with cheese, meatless
58104730	Quesadilla with meat and cheese

58104740	Quesadilla with poultry and cheese
58104820	Taquitos with meat
58104830	Taquitos with chicken
58105000	Fajita with chicken and vegetables
58105050	Fajita with beef and vegetables
58105100	Pupusa, cheese-filled
58105105	Pupusa, bean-filled
58105110	Pupusa, meat-filled
58115110	Tamale casserole, Puerto Rican style (Tamales en cazuela)
58115150	Tamal in a leaf, Puerto Rican style (Tamales en hoja)
58115210	Taco with crab meat, Puerto Rican style (Taco de jueye)
58128120	Cornmeal dressing with chicken or turkey and vegetables

Crackers

[Magnesium L-Threonate] = 0.12%

54001000	Crackers, NS as to sweet or nonsweet
54101010	Cracker, animal
54102010	Crackers, graham
54102020	Crackers, graham, chocolate covered
54102050	Crackers, oatmeal
54102060	Crackers, Cuban
54102070	Crackers, Cuca
54102080	Crackers, graham, with raisins
54102100	Crackers, graham, lowfat
54102110	Crackers, graham, fat free
54102200	Crackers, graham, sandwich-type, with filling
54201010	Crackers, matzo, low sodium
54202010	Crackers, saltine, low sodium
54202050	Crackers, saltine, fat free, low sodium
54203010	Crackers, toast thins (rye, wheat, white flour), low sodium
54204010	Cracker, 100% whole wheat, low sodium
54205010	Cracker, snack, low sodium
54205030	Cracker, cheese, low sodium
54205100	Cracker, snack, lowfat, low sodium
54206010	Puffed rice cake without salt
54207010	Crispbread, wheat, low sodium
54210010	Cracker, multigrain, salt free
54222000	Crispbread, rye, low sodium
54301000	Cracker, snack
54301100	Cracker, snack, reduced fat
54301200	Cracker, snack, fat free
54304000	Cracker, cheese
54304100	Cracker, cheese, reduced fat
54304500	Cracker, high fiber, no added fat
54305000	Crispbread, wheat, no added fat
54305500	Crispbread, wheat or rye, extra crispy
54307000	Crackers, matzo
54308000	Crackers, milk
54309000	Crackers, oat
54313000	Crackers, oyster
54318500	Rice cake, cracker-type
54319000	Crackers, rice
54319010	Puffed rice cake

54319020	Popcorn cake
54319200	Puffed wheat cake
54322000	Crispbread, rye, no added fat
54325000	Crackers, saltine
54325050	Crackers, saltine, whole wheat
54327950	Crackers, cylindrical, peanut-butter filled
54328000	Crackers, sandwich-type, NFS
54328100	Cracker, sandwich-type, peanut butter filled
54328110	Cracker, sandwich-type, peanut butter filled, reduced fat
54328200	Cracker, sandwich-type, cheese-filled
54334000	Crackers, toast thins (rye, pumpernickel, white flour)
54336000	Crackers, water biscuits
54337000	Cracker, 100% whole wheat
54337050	Cracker, 100% whole wheat, reduced fat
54337100	Crackers, whole wheat and bran
54338000	Crackers, wheat
54338100	Crackers, wheat, reduced fat
54339000	Crackers, corn

Muffins and English Muffins

[Magnesium L-Threonate] = 0.12%

51186010	Muffin, English
51186020	Muffin, English, toasted
51186100	Muffin, English, with raisins
51186120	Muffin, English, with raisins, toasted
51186130	Muffin, English, cheese
51186140	Muffin, English, cheese, toasted
51186160	Muffin, English, with fruit other than raisins
51186180	Muffin, English, with fruit other than raisins, toasted
51202000	Muffin, English, whole wheat, 100%
51202020	Muffin, English, whole wheat, 100%, toasted
51202050	Muffin, English, whole wheat, 100%, with raisins
51202060	Muffin, English, whole wheat, 100%, with raisins, toasted
51302500	Muffin, English, wheat bran
51302510	Muffin, English, wheat bran, toasted
51302520	Muffin, English, wheat bran, with raisins
51302530	Muffin, English, wheat bran, with raisins, toasted
51303010	Muffin, English, wheat or cracked wheat
51303020	Muffin, English, wheat or cracked wheat, toasted
51303030	Muffin, English, whole wheat, NS as to 100%
51303040	Muffin, English, whole wheat, NS as to 100%, toasted
51303050	Muffin, English, wheat or cracked wheat, with raisins
51303060	Muffin, English, wheat or cracked wheat, with raisins, toasted
51303070	Muffin, English, whole wheat, NS as to 100%, with raisins
51303080	Muffin, English, whole wheat, NS as to 100%, with raisins, toasted
51401200	Muffin, English, rye
51401210	Muffin, English, rye, toasted
51404550	Muffin, English, pumpernickel
51404560	Muffin, English, pumpernickel, toasted
51503000	Muffin, English, oat bran
51503010	Muffin, English, oat bran, toasted
51503040	Muffin, English, oat bran, with raisins
51503050	Muffin, English, oat bran with raisins, toasted

51630200	Muffin, English, multigrain
51630210	Muffin, English, multigrain, toasted
52301000	Muffin, NFS
52302010	Muffin, fruit and/or nuts
52302020	Muffin, fruit and/or nut, low fat
52302100	Muffin, fruit, fat free, cholesterol free
52302500	Muffin, chocolate chip
52302600	Muffin, chocolate
52302610	Muffin, chocolate, lowfat
52303010	Muffin, whole wheat
52303500	Muffin, wheat
52303550	Muffin, buckwheat
52304010	Muffin, wheat bran
52304040	Muffin, bran with fruit, lowfat
52304060	Muffin, bran with fruit, no fat, no cholesterol
52304100	Muffin, oatmeal
52304150	Muffin, oat bran
52304200	Muffin, oat bran with fruit and/or nuts
52306010	Muffin, plain
52306300	Muffin, cheese
52306500	Muffin, pumpkin
52306550	Muffin, zucchini
52306700	Muffin, carrot
52307020	Muffin, multigrain, with nuts
52307120	Muffin, multigrain, with fruit
52308010	Matzo, fritters
52308020	Matzo ball
52311010	Popover

Pancakes and Waffles

[Magnesium L-Threonate] = 0.12%

55101000	Pancakes, plain
55101010	Pancakes, reduced calorie, high fiber
55101020	Pancakes, plain, fat free
55103000	Pancakes, with fruit
55103100	Pancakes, with chocolate chips
55105000	Pancakes, buckwheat
55105100	Pancakes, cornmeal
55105200	Pancakes, whole wheat
55105300	Pancakes, sour dough
55105400	Pancakes, rye
55201000	Waffle, plain
55202000	Waffle, wheat, bran, or multigrain
55203000	Waffle, fruit
55203500	Waffle, nut and honey
55203600	Waffle, chocolate chip
55204000	Waffle, cornmeal
55205000	Waffle, 100% whole wheat or 100% whole grain
55206000	Waffle, oat bran
55207000	Waffle, multi-bran
55211000	Waffle, plain, fat free
55211050	Waffle, plain, lowfat
55301000	French toast, plain

55301050	French toast sticks, plain
55310100	Bread fritters, Puerto Rican style (Torrejas gallegas, Galician fritters)
55401000	Crepe, plain

Mixed foods containing Pancakes and Waffles

Adjusted for pancake and waffle content of 30%

[Magnesium L-Threonate] = 0.036%

58120110	Crepes, filled with meat, fish, or poultry, with sauce
58120120	Crepe, filled with beef, pork, fish and/or poultry, no sauce on top

Pastries

[Magnesium L-Threonate] = 0.12%

52320100	Toaster muffin, fruit, untoasted
52320110	Toaster muffin, fruit, toasted
53300100	Pie, NFS
53300170	Pie, individual size or tart, NFS
53300180	Pie, fried, NFS
53301000	Pie, apple, two crust
53301070	Pie, apple, individual size or tart
53301080	Pie, apple, fried pie
53301500	Pie, apple, one crust
53301750	Pie, apple, diet
53302000	Pie, apricot, two crust
53302070	Pie, apricot, individual size or tart
53302080	Pie, apricot, fried pie
53303000	Pie, blackberry, two crust
53303070	Pie, blackberry, individual size or tart
53303500	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry; two crust
53303510	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry; one crust
53303570	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry, individual size or tart
53304000	Pie, blueberry, two crust
53304050	Pie, blueberry, one crust
53304070	Pie, blueberry, individual size or tart
53305000	Pie, cherry, two crust
53305010	Pie, cherry, one crust
53305070	Pie, cherry, individual size or tart
53305080	Pie, cherry, fried pie
53305700	Pie, lemon (not cream or meringue)
53305720	Pie, lemon (not cream or meringue), individual size or tart
53305750	Pie, lemon, fried pie
53306000	Pie, mince, two crust
53306070	Pie, mince, individual size or tart
53307000	Pie, peach, two crust
53307050	Pie, peach, one crust
53307070	Pie, peach, individual size or tart
53307080	Pie, peach, fried pie
53307500	Pie, pear, two crust
53307570	Pie, pear, individual size or tart
53308000	Pie, pineapple, two crust

53308070	Pie, pineapple, individual size or tart
53308300	Pie, plum, two crust
53308500	Pie, prune, one crust
53309000	Pie, raisin, two crust
53309070	Pie, raisin, individual size or tart
53310000	Pie, raspberry, one crust
53310050	Pie, raspberry, two crust
53311000	Pie, rhubarb, two crust
53311050	Pie, rhubarb, one crust
53311070	Pie, rhubarb, individual size or tart
53312000	Pie, strawberry, one crust
53313000	Pie, strawberry-rhubarb, two crust
53314000	Pie, strawberry, individual size or tart
53340000	Pie, apple-sour cream
53340500	Pie, cherry, made with cream cheese and sour cream
53341000	Pie, banana cream
53341070	Pie, banana cream, individual size or tart
53341500	Pie, buttermilk
53341750	Pie, chess
53342000	Pie, chocolate cream
53342070	Pie, chocolate cream, individual size or tart
53343000	Pie, coconut cream
53343070	Pie, coconut cream, individual size or tart
53344000	Pie, custard
53344070	Pie, custard, individual size or tart
53344200	Mixed fruit tart filled with custard or cream cheese
53344300	Dessert pizza
53345000	Pie, lemon cream
53345070	Pie, lemon cream, individual size or tart
53346000	Pie, peanut butter cream
53346500	Pie, pineapple cream
53347000	Pie, pumpkin
53347070	Pie, pumpkin, individual size or tart
53347100	Pie, raspberry cream
53347500	Pie, sour cream, raisin
53347600	Pie, squash
53348000	Pie, strawberry cream
53348070	Pie, strawberry cream, individual size or tart
53360000	Pie, sweetpotato
53365000	Pie, vanilla cream
53366000	Pie, yogurt, frozen
53370000	Pie, chiffon, not chocolate
53371000	Pie, chiffon, chocolate
53371100	Pie, chiffon, with liqueur
53373000	Pie, black bottom
53381000	Pie, lemon meringue
53381070	Pie, lemon meringue, individual size or tart
53382000	Pie, chocolate-marshmallow
53385000	Pie, pecan
53385070	Pie, pecan, individual size or tart
53385500	Pie, oatmeal
53386000	Pie, pudding, flavors other than chocolate
53386050	Pie, pudding, flavors other than chocolate, individual size or tart
53386250	Pie, pudding, chocolate, with chocolate coating, individual size

53386500	Pie, pudding, flavors other than chocolate, with chocolate coating, individual size
53387000	Pie, Toll house chocolate chip
53390000	Pie, shoo-fly
53390100	Pie, tofu with fruit
53391000	Pie shell
53391100	Pie shell, graham cracker
53391150	Pie shell, chocolate wafer
53391200	Vanilla wafer dessert base
53400200	Blintz, cheese-filled
53400300	Blintz, fruit-filled
53410100	Cobbler, apple
53410200	Cobbler, apricot
53410300	Cobbler, berry
53410500	Cobbler, cherry
53410800	Cobbler, peach
53410850	Cobbler, pear
53410860	Cobbler, pineapple
53410880	Cobbler, plum
53410900	Cobbler, rhubarb
53415100	Crisp, apple, apple dessert
53415120	Fritter, apple
53415200	Fritter, banana
53415220	Fritter, berry
53415300	Crisp, blueberry
53415400	Crisp, cherry
53415500	Crisp, peach
53415600	Crisp, rhubarb
53420000	Cream puff, eclair, custard or cream filled, NS as to icing
53420100	Cream puff, eclair, custard or cream filled, not iced
53420200	Cream puff, eclair, custard or cream filled, iced
53420210	Cream puff, eclair, custard or cream filled, iced, reduced fat
53420250	Cream puff, no filling or icing
53420300	Air filled fritter or fried puff, without syrup, Puerto Rican style (Bunuelos de viento)
53420310	Wheat flour fritter, without syrup
53420400	Sopaipilla, without syrup or honey
53420410	Sopaipilla with syrup or honey
53430000	Crepe, dessert type, NS as to filling
53430100	Crepe, dessert type, chocolate-filled
53430200	Crepe, dessert type, fruit-filled
53430250	Crepe suzette
53430300	Crepe, dessert type, ice cream-filled
53430700	Tamale, sweet
53430750	Tamale, sweet, with fruit
53440000	Strudel, apple
53440300	Strudel, berry
53440500	Strudel, cherry
53440600	Strudel, cheese
53440700	Strudel, peach
53440750	Strudel, pineapple
53440800	Strudel, cheese and fruit
53441110	Baklava
53441210	Basbousa (semolina dessert dish)
53450000	Turnover or dumpling, apple
53450300	Turnover or dumpling, berry

53450500	Turnover or dumpling, cherry
53450800	Turnover or dumpling, lemon
53451000	Turnover or dumpling, peach
53451500	Turnover, guava
53451750	Turnover, pumpkin
53452100	Pastry, fruit-filled
53452120	Pastry, Oriental, made with bean or lotus seed paste filling (baked)
53452130	Pastry, Oriental, made with bean paste and salted egg yolk filling (baked)
53452150	Pastry, Chinese, made with rice flour
53452170	Pastry, cookie type, fried
53452200	Pastry, Italian, with cheese
53452400	Pastry, puff
53452420	Pastry, puff, custard or cream filled, iced or not iced
53452450	Cheese pastry puffs
53452500	Pastry, mainly flour and water, fried
53453150	Empanada, Mexican turnover, fruit-filled
53453170	Empanada, Mexican turnover, pumpkin
53500100	Breakfast pastry, NFS
53510000	Danish pastry, plain or spice
53510100	Danish pastry, with fruit
53510200	Danish pastry, with nuts
53511000	Danish pastry, with cheese
53511500	Danish pastry, with cheese, fat free, cholesterol free
53520000	Doughnut, NS as to cake or yeast
53520110	Doughnut, cake type
53520120	Doughnut, chocolate, cake type
53520140	Doughnut, cake type, chocolate covered
53520150	Doughnut, cake type, chocolate covered, dipped in peanuts
53520160	Doughnut, chocolate, cake type, with chocolate icing
53520200	Churros
53520500	Doughnut, oriental
53520600	Cruller, NFS
53520700	French cruller
53521100	Doughnut, chocolate, raised or yeast, with chocolate icing
53521110	Doughnut, raised or yeast
53521120	Doughnut, chocolate, raised or yeast
53521130	Doughnut, raised or yeast, chocolate covered
53521140	Doughnut, jelly
53521210	Doughnut, custard-filled
53521220	Doughnut, chocolate cream-filled
53521230	Doughnut, custard-filled, with icing
53521250	Doughnut, wheat
53521300	Doughnut, wheat, chocolate covered
53530000	Breakfast tart
53530010	Breakfast tart, lowfat
58109000	Italian pie, meatless
58109010	Italian pie with meat
58110110	Egg roll, meatless
58110120	Egg roll, with shrimp
58110130	Egg roll, with beef and/or pork
58110170	Egg roll, with chicken or turkey
58110200	Roll with meat and/or shrimp, vegetables and rice paper (not fried)
58111110	Won ton (wonton), fried, meat filled
58111120	Won ton (wonton), fried, meatless

58111200	Puffs, fried, crab meat and cream cheese filled
58116110	Meat turnover, Puerto Rican style (Pastelillo de carne; Empanadilla)
58116115	Empanada, Mexican turnover, filled with cheese and vegetables
58116120	Empanada, Mexican turnover, filled with meat and vegetables
58116130	Empanada, Mexican turnover, filled with chicken and vegetables
58116210	Meat pie, Puerto Rican style (Pastelon de carne)
58116310	Cheese turnover, Puerto Rican style (Pastelillo de queso; Empanadilla)
58117410	Codfish fritter, Puerto Rican style (Bacalaitos fritos)
58121510	Dumpling, meat-filled
58121610	Dumpling, potato- or cheese-filled
58122310	Knish, potato (pastry filled with potato)
58122320	Knish, cheese (pastry filled with cheese)
58122330	Knish, meat (pastry filled with meat)
58124210	Pastry, cheese-filled
58124250	Spanakopitta
58124500	Pastry, filled with potatoes and peas, fried
58125110	Quiche with meat, poultry or fish
58125120	Spinach quiche, meatless
58125180	Cheese quiche, meatless
58126000	Bierock (turnover filled with ground beef and cabbage mixture)
58126110	Turnover, meat-filled, no gravy
58126120	Turnover, meat-filled, with gravy
58126130	Turnover, meat- and cheese-filled, no gravy
58126140	Turnover, meat- and bean-filled, no gravy
58126150	Turnover, meat- and cheese-filled, tomato-based sauce
58126170	Turnover, meat-and vegetable- filled (no potatoes, no gravy)
58126180	Turnover, meat-, potato-, and vegetable-filled, no gravy
58126270	Turnover, chicken- or turkey-, and cheese-filled, no gravy
58126280	Turnover, chicken- or turkey-, and vegetable-filled, lower in fat
58126290	Turnover, meat- and cheese-filled, lower in fat
58126300	Turnover, meat- and cheese-filled, tomato-based sauce, lower in fat
58126310	Turnover, chicken, with gravy
58126400	Turnover, filled with egg, meat and cheese
58126410	Turnover, filled with egg, meat, and cheese, lower in fat
58127110	Vegetables in pastry
58127150	Vegetables and cheese in pastry
58127500	Vegetable submarine sandwich, with fat free spread

Beverages and Beverage Bases

Bottled Water

[Magnesium L-Threonate] = 0.0885%

94100100	Water, bottled, unsweetened
94100200	Water, bottled, sweetened, with low or no calorie sweetener
94100300	Water, fruit flavored, sweetened, with high fructose corn syrup and low calorie sweetener
94210100	Propel Water
94210200	Glaceau Water

Carbonated Fruit Drinks

[Magnesium L-Threonate] = 0.0885%

92410510	Soft drink, fruit-flavored, caffeine free
92410520	Soft drink, fruit-flavored, sugar free, caffeine free

92410550	Soft drink, fruit flavored, caffeine containing
92410560	Soft drink, fruit flavored, caffeine containing, sugar-free
92431000	Carbonated juice drink, NS as to type of juice
92432000	Carbonated citrus juice drink
92433000	Carbonated noncitrus juice drink

Carbonated Soft Drinks

[Magnesium L-Threonate] = 0.0885%

92400000	Soft drink, NFS
92400100	Soft drink, NFS, sugar-free
92410110	Carbonated water, sweetened
92410210	Carbonated water, unsweetened
92410250	Carbonated water, sweetened, with low-calorie or no-calorie sweetener
92410310	Soft drink, cola-type
92410315	Soft drink, cola type, reduced sugar
92410320	Soft drink, cola-type, sugar-free
92410330	Soft drink, cola-type, with higher caffeine
92410340	Soft drink, cola-type, decaffeinated
92410350	Soft drink, cola-type, decaffeinated, sugar-free
92410360	Soft drink, pepper-type
92410370	Soft drink, pepper-type, sugar-free
92410390	Soft drink, pepper-type, decaffeinated
92410400	Soft drink, pepper-type, decaffeinated, sugar-free
92410410	Cream soda
92410420	Cream soda, sugar-free
92410610	Ginger ale
92410620	Ginger ale, sugar-free
92410710	Root beer
92410720	Root beer, sugar-free
92410810	Chocolate-flavored soda
92410820	Chocolate-flavored soda, sugar-free
92411510	Cola with fruit or vanilla flavor
92411520	Cola with chocolate flavor
92411610	Cola with fruit or vanilla flavor, sugar-free
92411620	Cola with chocolate flavor, sugar-free
92416010	Mavi drink
92417010	Soft drink, ale type

Mixed Foods containing Carbonated Soft Drinks

Adjusted for carbonated soft drinks content of 50 to 90%

[Magnesium L-Threonate] = 0.04425 to 0.0797%

93301031	Canadian Club and soda
93301060	Gin and Tonic
93301080	High ball
93301142	Seven and Seven
93301150	Tom Collins
93301170	Bourbon and soda
93301180	Mixed Drinks (for recipe modifications)
93301190	Rum and cola
93301230	Sloe gin fizz
93301330	Gin Rickey

93301600 Gin fizz
93504100 Rum cooler

Mixed Foods containing Carbonated Soft Drinks

Adjusted for carbonated soft drinks content of up to 50%

[Magnesium L-Threonate] = up to 0.4425%

93301270 Fruit punch, alcoholic
93301280 Singapore Sling
93301360 Long Island iced tea

Energy and Sports Drinks

[Magnesium L-Threonate] = 0.0885%

92560000 Fruit-flavored thirst quencher beverage
92560100 Gatorade Thirst Quencher sports drink
92560200 Powerade sports drink
92565000 Fruit-flavored sports drink or thirst quencher beverage, low calorie
92565100 Gatorade G2 thirst quencher sports drink, low calorie
92565200 Powerade Zero sports drink, low calorie
92570100 Fluid replacement, electrolyte solution
92570500 Fluid replacement, 5% glucose in water
92650000 Red Bull Energy Drink
92650005 Red Bull Energy Drink, sugar-free
92650100 Full Throttle Energy Drink
92650200 Monster Energy Drink
92650205 Mountain Dew AMP Energy Drink
92650210 Mountain Dew AMP Energy Drink, sugar-free
92650700 Rockstar Energy Drink
92650705 Rockstar Energy Drink, sugar-free
92650800 Vault Energy Drink
92650805 Vault Zero Energy drink
92651000 Energy drink

Fruit Drinks and Ades

[Magnesium L-Threonate] = 0.0885%

92510610 Fruit juice drink
92510650 Tamarind drink, Puerto Rican (Refresco de tamarindo)
92510720 Fruit punch, made with fruit juice and soda
92510730 Fruit punch, made with soda, fruit juice, and sherbet or ice cream
92511010 Fruit flavored drink (formerly lemonade)
92511250 Citrus fruit juice drink, containing 40-50% juice
92512050 Frozen daiquiri mix, from frozen concentrate, reconstituted
92512090 Pina Colada, nonalcoholic
92512110 Whiskey sour, nonalcoholic
92530410 Fruit flavored drink, with high vitamin C
92530510 Cranberry juice drink or cocktail, with high vitamin C
92530610 Fruit juice drink, with high vitamin C
92531030 Fruit juice drink, with thiamin (vitamin B1) and high vitamin C
92541010 Fruit flavored drink, made from powdered mix
92542000 Fruit flavored drink, made from powdered mix, with high vitamin C
92550030 Fruit juice drink, low calorie, with high vitamin C
92550040 Fruit juice drink, low calorie

92550110	Cranberry juice drink or cocktail, low calorie, with high vitamin C
92550350	Light orange juice beverage, 40-50% juice, lower sugar and calories, with artificial sweetener
92550610	Fruit flavored drink, low calorie, with high vitamin C
92550620	Fruit flavored drink, low calorie
92552000	Fruit flavored drink, made from powdered mix, low calorie, with high vitamin C
92552010	Fruit flavored drink, made from powdered mix, low calorie
92552020	Fruit juice drink, reduced sugar, with thiamin (vitamin B1) and high vitamin C
92552030	Fruit juice drink, reduced sugar, with vitamin E
92582100	Fruit juice drink, with high vitamin C, plus added calcium
92582110	Fruit juice drink, with thiamin (vitamin B1) and high vitamin C plus calcium
92582120	Fruit flavored drink, reduced sugar, with high vitamin C, plus added calcium

Fruit Drinks and Ades, Frozen

Adjusted for not being reconstituted, multiplied by a factor of 3
[Magnesium L-Threonate] = 0.2655%

92511000	Lemonade, frozen concentrate, not reconstituted
92512040	Frozen daiquiri mix, frozen concentrate, not reconstituted

Fruit Drinks and Ades, Powdered

Adjusted for not being reconstituted, multiplied by a factor of 15
[Magnesium L-Threonate] = 1.3275%

92900100	Tang, dry concentrate
92900110	Fruit-flavored beverage, dry concentrate, with sugar, not reconstituted
92900200	Fruit-flavored beverage, dry concentrate, low calorie, not reconstituted
92900300	Fruit-flavored thirst quencher beverage, dry concentrate, not reconstituted

Breakfast Cereals

Instant and Regular Hot Cereals

[Magnesium L-Threonate] = 0.12%

56200300	Cereal, cooked, NFS
56200350	Cereal, cooked, instant, NS as to grain
56200490	Buckwheat groats, cooked, NS as to fat added in cooking
56200500	Buckwheat groats, cooked, fat not added in cooking
56200510	Buckwheat groats, cooked, fat added in cooking
56200990	Grits, cooked, corn or hominy, NS as to regular, quick or instant, NS as to fat added in cooking
56201000	Grits, cooked, corn or hominy, NS as to regular, quick, or instant, fat not added in cooking
56201010	Grits, cooked, corn or hominy, regular, fat not added in cooking
56201020	Grits, cooked, corn or hominy, regular, fat added in cooking
56201030	Grits, cooked, corn or hominy, regular, NS as to fat added in cooking
56201040	Grits, cooked, corn or hominy, NS as to regular, quick, or instant, fat added in cooking
56201060	Grits, cooked, corn or hominy, with cheese, NS as to regular, quick, or instant, NS as to fat added in cooking
56201061	Grits, cooked, corn or hominy, with cheese, NS as to regular, quick, or instant, fat not added in cooking
56201062	Grits, cooked, corn or hominy, with cheese, NS as to regular, quick, or instant, fat added in cooking
56201070	Grits, cooked, corn or hominy, with cheese, regular, NS as to fat added in cooking
56201071	Grits, cooked, corn or hominy, with cheese, regular, fat not added in cooking

56201072	Grits, cooked, corn or hominy, with cheese, regular, fat added in cooking
56201080	Grits, cooked, corn or hominy, with cheese, quick, NS as to fat added in cooking
56201081	Grits, cooked, corn or hominy, with cheese, quick, fat not added in cooking
56201082	Grits, cooked, corn or hominy, with cheese, quick, fat added in cooking
56201090	Grits, cooked, corn or hominy, with cheese, instant, NS as to fat added in cooking
56201091	Grits, cooked, corn or hominy, with cheese, instant, fat not added in cooking
56201092	Grits, cooked, corn or hominy, with cheese, instant, fat added in cooking
56201110	Grits, cooked, corn or hominy, quick, fat not added in cooking
56201120	Grits, cooked, corn or hominy, quick, fat added in cooking
56201130	Grits, cooked, corn or hominy, quick, NS as to fat added in cooking
56201210	Grits, cooked, corn or hominy, instant, fat not added in cooking
56201220	Grits, cooked, corn or hominy, instant, fat added in cooking
56201230	Grits, cooked, corn or hominy, instant, NS as to fat added in cooking
56201240	Grits, cooked, flavored, corn or hominy, instant, fat not added in cooking
56201250	Grits, cooked, flavored, corn or hominy, instant, fat added in cooking
56201260	Grits, cooked, flavored, corn or hominy, instant, NS as to fat added in cooking
56201300	Grits, cooked, corn or hominy, NS as to regular, quick, or instant, NS as to fat added in cooking, made with milk
56202960	Oatmeal, cooked, NS as to regular, quick or instant; NS as to fat added in cooking
56202970	Oatmeal, cooked, quick (1 or 3 minutes), NS as to fat added in cooking
56202980	Oatmeal, cooked, regular, NS as to fat added in cooking
56203000	Oatmeal, cooked, NS as to regular, quick or instant, fat not added in cooking
56203010	Oatmeal, cooked, regular, fat not added in cooking
56203020	Oatmeal, cooked, quick (1 or 3 minutes), fat not added in cooking
56203030	Oatmeal, cooked, instant, fat not added in cooking
56203040	Oatmeal, cooked, NS as to regular, quick, or instant, fat added in cooking
56203050	Oatmeal, cooked, regular, fat added in cooking
56203060	Oatmeal, cooked, quick (1 or 3 minutes), fat added in cooking
56203070	Oatmeal, cooked, instant, fat added in cooking
56203080	Oatmeal, cooked, instant, NS as to fat added in cooking
56203110	Oatmeal with maple flavor, cooked
56203200	Oatmeal with fruit, cooked
56203210	Oatmeal, NS as to regular, quick, or instant, made with milk, fat not added in cooking
56203211	Oatmeal, cooked, regular, made with milk, fat not added in cooking
56203212	Oatmeal, cooked, quick (1 or 3 minutes), made with milk, fat not added in cooking
56203213	Oatmeal, cooked, instant, made with milk, fat not added in cooking
56203220	Oatmeal, NS as to regular, quick, or instant, made with milk, fat added in cooking
56203221	Oatmeal, cooked, regular, made with milk, fat added in cooking
56203222	Oatmeal, cooked, quick (1 or 3 minutes), made with milk, fat added in cooking
56203223	Oatmeal, cooked, instant, made with milk, fat added in cooking
56203230	Oatmeal, NS as to regular, quick, or instant, made with milk, NS as to fat added in cooking
56203231	Oatmeal, cooked, regular, made with milk, NS as to fat added in cooking
56203232	Oatmeal, cooked, quick (1 or 3 minutes), made with milk, NS as to fat added in cooking
56203233	Oatmeal, cooked, instant, made with milk, NS as to fat added in cooking
56203540	Oatmeal, made with milk and sugar, Puerto Rican style
56203600	Oatmeal, multigrain, cooked, NS as to fat added in cooking
56203610	Oatmeal, multigrain, cooked, fat not added in cooking
56203620	Oatmeal, multigrain, cooked, fat added in cooking
56208500	Oat bran cereal, cooked, fat not added in cooking
56208510	Oat bran cereal, cooked, fat added in cooking
56208520	Oat bran cereal, cooked, NS as to fat added in cooking
56208530	Oat bran cereal, cooked, made with milk, fat not added in cooking
56208540	Oat bran cereal, cooked, made with milk, fat added in cooking

56208550 Oat bran cereal, cooked, made with milk, NS as to fat added in cooking
56210000 Nestum cereal

Ready-To-Eat Breakfast Cereals
[Magnesium L-Threonate] = 0.12%

57000000 Cereal, NFS
57000050 Kashi cereal, NS as to ready to eat or cooked
57000100 Oat cereal, NFS
57100100 Cereal, ready-to-eat, NFS
57100400 Character cereals, TV or movie, General Mills
57100500 Character cereals, TV or movie, Kellogg's
57101000 All-Bran
57101020 All-Bran with Extra Fiber
57102000 Alpen
57103000 Alpha-Bits
57103020 Alpha-bits with marshmallows
57103050 Amaranth Flakes
57103100 Apple Cinnamon Cheerios
57103500 Apple Cinnamon Squares Mini-Wheats, Kellogg's (formerly Apple Cinnamon Squares)
57104000 Apple Jacks
57106050 Banana Nut Crunch Cereal (Post)
57106100 Basic 4
57106250 Berry Berry Kix
57106260 Berry Burst Cheerios
57106530 Blueberry Morning, Post
57107000 Booberry
57110000 All-Bran Bran Buds, Kellogg's (formerly Bran Buds)
57111000 Bran Chex
57117000 Cap'n Crunch
57117500 Cap'n Crunch's Christmas Crunch
57119000 Cap'n Crunch's Crunch Berries
57120000 Cap'n Crunch's Peanut Butter Crunch
57123000 Cheerios
57124000 Chex cereal, NFS
57124200 Chocolate flavored frosted puffed corn cereal
57124300 Chocolate Lucky Charms
57125000 Cinnamon Toast Crunch
57125010 Cinnamon Toast Crunch Reduced Sugar
57125900 Honey Nut Clusters (formerly called Clusters)
57126000 Cocoa Krispies
57126500 Cocoa Blasts, Quaker
57127000 Cocoa Pebbles
57128000 Cocoa Puffs
57128880 Complete Oat Bran Flakes, Kellogg's (formerly Common Sense Oat Bran, plain)
57130000 Cookie-Crisp
57131000 Crunchy Corn Bran, Quaker
57132000 Corn Chex
57134000 Corn flakes, NFS
57134090 Corn flakes, low sodium
57135000 Corn flakes, Kellogg's
57137000 Corn Puffs
57138000 Total Corn Flakes
57139000 Count Chocula

57143000	Cracklin' Oat Bran
57143500	Cranberry Almond Crunch, Post
57144000	Crisp Crunch
57148000	Crispix
57148500	Crispy Brown Rice Cereal
57151000	Crispy Rice
57152000	Crispy Wheats'n Raisins
57160000	Curves Fruit and Nut Crunch Cereal
57201800	Disney cereals, Kellogg's
57201900	Dora the Explorer Cereal
57206000	Familia
57206700	Fiber One
57206800	Fiber 7 Flakes, Health Valley
57207000	Bran Flakes, NFS (formerly 40% Bran Flakes, NFS)
57208000	All-Bran Complete Wheat Flakes, Kellogg's
57209000	Natural Bran Flakes, Post (formerly called 40% Bran Flakes, Post)
57211000	Frankenberry
57212100	French Toast Crunch, General Mills
57213000	Froot Loops
57213005	Froot Loops Cereal Straws
57213850	Frosted Cheerios
57213900	Frosted Chex
57214000	Frosted Mini-Wheats
57214100	Frosted Wheat Bites
57215000	Frosty O's
57216000	Frosted rice, NFS
57218000	Frosted Rice Krispies, Kellogg's
57219000	Fruit & Fibre (fiber), NFS
57221000	Fruit & Fibre (fiber) with dates, raisins, and walnuts
57221650	Fruit Harvest cereal, Kellogg's
57221700	Fruit Rings, NFS
57221800	Fruit Whirls
57221810	Fruity Cheerios
57223000	Fruity Pebbles
57224000	Golden Grahams
57227000	Granola, NFS
57229000	Granola, lowfat, Kellogg's
57229500	Granola with Raisins, lowfat, Kellogg's
57230000	Grape-Nuts
57231000	Grape-Nuts Flakes
57231200	Great Grains, Raisin, Date, and Pecan Whole Grain Cereal, Post
57231250	Great Grains Double Pecan Whole Grain Cereal, Post
57237100	Honey Bunches of Oats
57237200	Honey Bunches of Oats with Vanilla Clusters, Post
57237300	Honey Bunches of Oats with Almonds, Post
57238000	Honeycomb, plain
57239000	Honeycomb, strawberry
57239100	Honey Crunch Corn Flakes, Kellogg's
57240100	Honey Nut Chex
57241000	Honey Nut Cheerios
57241200	Honey Nut Shredded Wheat, Post
57243000	Honey Smacks, Kellogg's (formerly Smacks; Honey Smacks)
57243870	Jenny O's
57244000	Just Right

57245000	Just Right Fruit and Nut (formerly Just Right with raisins, dates, and nuts)
57301100	Kaboom
57301500	Kashi, Puffed
57301505	Kashi Autumn Wheat
57301510	Kashi GOLEAN
57301511	Kashi GOLEAN Crunch
57301512	Kashi GOLEAN Crunch Honey Almond Flax
57301520	Kashi Good Friends
57301530	Kashi Heart to Heart Honey Toasted Oat
57302100	King Vitaman
57303100	Kix
57304100	Life (plain and cinnamon)
57305100	Lucky Charms
57305150	Frosted oat cereal with marshmallows
57305170	Malt-O-Meal Coco-Roos
57305180	Malt-O-Meal Corn Bursts
57305200	Malt-O-Meal Crispy Rice
57305210	Malt-O-Meal Frosted Flakes
57305300	Malt-O-Meal Fruity Dyno-Bites
57305500	Malt-O-Meal Honey and Nut Toasty O's
57305600	Malt-O-Meal Marshmallow Mateys
57306100	Malt-O-Meal Puffed Rice
57306120	Malt-O-Meal Puffed Wheat
57306500	Malt-O-Meal Golden Puffs (formerly Sugar Puffs)
57306700	Malt-O-Meal Toasted Oat Cereal
57306800	Malt-O-meal Tootie Fruities
57307010	Maple Pecan Crunch Cereal, Post
57307150	Marshmallow Safari, Quaker
57307500	Millet, puffed
57307600	Mini-Swirlz Cinnamon Bun Cereal, Kellogg's
57308150	Mueslix cereal, NFS
57308190	Muesli, dried fruit and nuts (formerly Muesli with raisins, dates, and almonds)
57308300	Multi Bran Chex
57308400	MultiGrain Cheerios
57308900	Natural Muesli, Jenny's Cuisine
57309100	Nature Valley Granola, with fruit and nuts
57311700	Nu System Cuisine Toasted Grain Circles
57316200	Nutty Nuggets, Ralston Purina
57316300	Oat Bran Flakes, Health Valley
57316410	Oatmeal Crisp, Apple Cinnamon (formerly Oatmeal Crisp with Apples)
57316450	Oatmeal Crisp with Almonds
57316500	Oatmeal Crisp, Raisin (formerly Oatmeal Raisin Crisp)
57316710	Oh's, Honey Graham
57316750	Oh's, Fruitangy, Quaker
57318000	100% Bran
57319000	100% Natural Cereal, plain, Quaker
57319500	Sun Country 100% Natural Granola, with Almonds
57320500	100 % Natural Cereal, with oats, honey and raisins, Quaker
57321500	100 % Natural Wholegrain Cereal with raisins, lowfat, Quaker
57321700	Optimum, Nature's Path
57321800	Optimum Slim, Nature's Path
57322500	Oreo O's cereal, Post
57323000	Sweet Crunch, Quaker (formerly called Popeye)
57323050	Sweet Puffs, Quaker

57325000	Product 19
57327450	Quaker Oat Bran Cereal
57327500	Quaker Oatmeal Squares (formerly Quaker Oat Squares)
57328000	Quisp
57329000	Raisin bran, NFS
57330000	Raisin Bran, Kellogg's
57330010	Raisin Bran Crunch, Kellogg's
57331000	Raisin Bran, Post
57332050	Raisin Bran, Total
57332100	Raisin Nut Bran
57335550	Reese's Peanut Butter Puffs cereal
57336000	Rice Chex
57337000	Rice Flakes, NFS
57339000	Rice Krispies, Kellogg's
57339100	Rice Krispies with Real Strawberries, Kellogg's
57339500	Rice Krispies Treats Cereal, Kellogg's
57340000	Rice, puffed
57341000	Shredded Wheat'N Bran
57341200	Smart Start Strong Heart Antioxidants Cereal, Kellogg's
57342010	Smorz, Kellogg's
57344000	Special K
57344005	Special K Chocolatey Delight
57344010	Special K Red Berries
57344015	Special K Fruit & Yogurt
57344020	Special K Vanilla Almond
57344025	Special K Cinnamon Pecan, Kellogg's
57346500	Oatmeal Honey Nut Heaven, Quaker (formerly Toasted Oatmeal, Honey Nut)
57347000	Corn Pops
57348000	Frosted corn flakes, NFS
57349000	Frosted Flakes, Kellogg's
57349020	Reduced Sugar Frosted Flakes Cereal, Kellogg's
57355000	Golden Crisp (Formerly called Super Golden Crisp)
57401100	Toasted oat cereal
57403100	Toasties, Post
57404100	Malt-O-Meal Toasty O's
57404200	Malt-O-Meal Apple and Cinnamon Toasty O's
57406100	Total
57406105	Total Cranberry Crunch
57407100	Trix
57407110	Trix, reduced sugar
57408100	Uncle Sam Cereal (formerly Uncle Sam's Hi Fiber Cereal)
57409100	Waffle Crisp, Post
57410000	Weetabix Whole Wheat Cereal
57411000	Wheat Chex
57412000	Wheat germ, plain
57413000	Wheat germ, with sugar and honey
57416000	Wheat, puffed, plain
57416010	Wheat, puffed, presweetened with sugar
57417000	Shredded Wheat, 100%
57418000	Wheaties
57419000	Yogurt Burst Cheerios

Chewing Gum

Chewing Gum

[Magnesium L-Threonate] = 0.12%

91800100	Chewing gum, NFS
91801000	Chewing gum, sugared
91802000	Chewing gum, sugarless

Egg Products

Liquid, Frozen, or Dried Eggs

[Magnesium L-Threonate] = 0.12%

33000100	Egg substitute, NS as to powdered, frozen, or liquid
33102010	Scrambled egg, made from powdered mixture
33201010	Scrambled egg, made from cholesterol-free frozen mixture
33201110	Scrambled egg, made from cholesterol-free frozen mixture with cheese
33201500	Scrambled egg, made from cholesterol-free frozen mixture with vegetables
33202010	Scrambled egg, made from frozen mixture
33301010	Scrambled egg, made from packaged liquid mixture

Commercially Prepared Egg Dishes

[Magnesium L-Threonate] = 0.12%

35001000	Scrambled eggs, sausage, hash brown potatoes (frozen meal)
35002000	Scrambled eggs, bacon, home fried potatoes (frozen meal)
35003000	Scrambled eggs, sausage, pancakes (frozen meal)

Grain Products and Pastas

Cereal grains, prepared

[Magnesium L-Threonate] = 0.12%

50030000	Biscuit mix, dry
55501000	Flour and water patty
55502000	Flour and water gravy
55601000	Flour and milk patty
55610200	Dumpling, fried, Puerto Rican style
55610300	Dumpling, plain
56200390	Barley, cooked, NS as to fat added in cooking
56200400	Barley, cooked, fat not added in cooking
56201510	Cornmeal mush, made with water
56201520	Cornmeal mush, fried
56201530	Cornmeal mush, made with milk
56201540	Cornmeal, made with milk and sugar, Puerto Rican Style (Harina de maiz)
56201550	Cornmeal dumpling
56201560	Cornmeal sticks, boiled
56201600	Cornmeal, lime-treated, cooked (Masa harina)
56201700	Cornstarch with milk, eaten as a cereal (2 tbsp cornstarch in 2-1/2 cups milk)
56201800	Cornstarch, hydrolyzed powder
56204980	Rice, white, cooked, converted, NS as to fat added in cooking
56204990	Rice, white, cooked, regular, NS as to fat added in cooking
56205000	Rice, cooked, NFS

56205010	Rice, white, cooked, regular, fat not added in cooking
56205020	Rice, white, cooked, instant, NS as to fat added in cooking
56205030	Rice, white, cooked, instant, fat not added in cooking
56205040	Rice, white, cooked, converted, fat not added in cooking
56205050	Rice, cream of, cooked, fat not added in cooking
56205060	Rice, cooked, with milk
56205070	Rice, sweet (rice, cooked, with honey)
56205080	Rice, creamed, made with milk and sugar, Puerto Rican style
56205090	Rice, cream of, cooked, fat added in cooking
56205110	Rice, brown, cooked, regular, fat not added in cooking
56205120	Rice, brown, cooked, regular, NS as to fat added in cooking
56205130	Yellow rice, cooked, regular, NS as to fat added in cooking
56205150	Yellow rice, cooked, regular, fat not added in cooking
56205170	Yellow rice, cooked, regular, fat added in cooking
56205190	Rice, white, cooked, glutinous
56205200	Rice, frozen dessert, nondairy, flavors other than chocolate
56205210	Rice, wild, 100%, cooked, fat not added in cooking
56205300	Rice, white and wild, cooked, fat not added in cooking
56205310	Rice, brown and wild, cooked, fat not added in cooking
56205320	Rice, white and wild, cooked, fat added in cooking
56205330	Rice, white and wild, cooked, NS as to fat added in cooking
56205340	Rice, brown and wild, cooked, fat added in cooking
56205350	Rice, brown and wild, cooked, NS as to fat added in cooking
56205400	Rice, cooked, NS as to type, fat added in cooking
56205410	Rice, white, cooked with (fat) oil, Puerto Rican style (Arroz blanco)
56205420	Rice, white, cooked, regular, fat added in cooking
56205430	Rice, white, cooked, instant, fat added in cooking
56205440	Rice, white, cooked, converted, fat added in cooking
56205510	Rice, brown, cooked, regular, fat added in cooking
56205530	Rice, brown, cooked, instant, NS as to fat added in cooking
56205540	Rice, brown, cooked, instant, fat not added in cooking
56205550	Rice, brown, cooked, instant, fat added in cooking
56207100	Wheat, rolled, cooked, fat not added in cooking
56207110	Bulgur, cooked or canned, fat not added in cooking
56207120	Bulgur, cooked or canned, fat added in cooking
56207130	Bulgur, cooked or canned, NS as to fat added in cooking
56207140	Wheat, rolled, cooked, NS as to fat added in cooking
56209000	Rye, cream of, cooked
57603100	Rice polishings
57604100	Whole wheat, cracked
58118110	Cornstarch coconut dessert, Puerto Rican style (Tembleque)
58118210	Cornmeal coconut dessert, Puerto Rican style (Harina de maiz con coco)
58303100	Rice, with broccoli, cheese sauce (frozen side dish)
58303200	Rice, with green beans, water chestnuts, in sherry mushroom sauce (frozen side dish)
58310110	Frozen breakfast, NFS (frozen meal)

Mixed Foods containing Cereal grains, prepared

Adjusted for cereal grains, prepared content of 65 to 90%

[Magnesium L-Threonate] = 0.078 to 0.0797%

27213000	Beef and rice, no sauce (mixture)
58151140	Sushi, with vegetables, rolled in seaweed
58160220	Rice with vegetables, tomato-based sauce (mixture)
58161300	White rice with tomato sauce

58161310	Rice, brown, with tomato sauce
58163110	Rice with gravy
58163210	Rice, creamed
58164110	Rice with raisins

Mixed Foods containing Cereal grains, prepared

Adjusted for cereal grains, prepared content of 40 to 64.99%

[Magnesium L-Threonate] = 0.048 to 0.078%

27213200	Beef and rice with gravy (mixture)
27220110	Pork and rice with tomato-based sauce (mixture)
27220120	Sausage and rice with tomato-based sauce (mixture)
27220310	Ham or pork and rice, no sauce (mixture)
27243000	Chicken or turkey and rice, no sauce (mixture)
27243700	Chicken in cheese sauce with Spanish rice
58117310	Kibby, Puerto Rican style (beef and bulgur) (Plato Arabe)
58117510	Hayacas, Puerto Rican style (hominy, pork or ham, vegetables)
58150110	Rice, fried, meatless
58150310	Rice, fried, NFS
58150320	Rice, fried, with chicken
58150330	Rice, fried, with pork
58150340	Rice, fried, with beef
58150510	Rice, fried, with shrimp
58151110	Sushi, no vegetables, no seafood (no fish or shellfish)
58156610	Pigeon pea asopao (Asopao de gandules)
58156710	Rice with stewed beans, Puerto Rican style
58160110	Rice with beans
58160160	Hopping John (blackeye peas and rice)
58160200	Rice with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, NS as to fat added in cooking
58160202	Rice with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, fat not added in cooking
58160204	Rice with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, fat added in cooking
58160205	Rice with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, NS as to fat added in cooking
58160207	Rice with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, fat not added in cooking
58160209	Rice with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, fat added in cooking
58160290	Rice with corn, NS as to fat added in cooking
58160292	Rice with corn, fat not added in cooking
58160294	Rice with corn, fat added in cooking
58160300	Rice with peas, NS as to fat added in cooking
58160302	Rice with peas, fat not added in cooking
58160304	Rice with peas, fat added in cooking
58160310	Rice with peas and carrots, NS as to fat added in cooking
58160312	Rice with peas and carrots, fat not added in cooking
58160314	Rice with peas and carrots, fat added in cooking
58160320	Rice with tomatoes, NS as to fat added in cooking
58160322	Rice with tomatoes, fat not added in cooking
58160324	Rice with tomatoes, fat added in cooking
58161120	Brown rice casserole with cheese
58161320	Rice, brown, with beans

58161325	Rice, brown, with beans and tomatoes
58161400	Rice, brown, with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, NS as to fat added in cooking
58161402	Rice, brown, with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, fat not added in cooking
58161404	Rice, brown, with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, fat added in cooking
58161405	Rice, brown, with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, NS as to fat added in cooking
58161407	Rice, brown, with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, fat not added in cooking
58161409	Rice, brown, with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, fat added in cooking
58161420	Rice, brown, with corn, NS as to fat added in cooking
58161422	Rice, brown, with corn, fat not added in cooking
58161424	Rice, brown, with corn, fat added in cooking
58161430	Rice, brown, with peas, NS as to fat added in cooking
58161432	Rice, brown, with peas, fat not added in cooking
58161434	Rice, brown, with peas, fat added in cooking
58161440	Rice, brown, with peas and carrots, NS as to fat added in cooking
58161442	Rice, brown, with peas and carrots, fat not added in cooking
58161444	Rice, brown, with peas and carrots, fat added in cooking
58161450	Rice, brown, with tomatoes, NS as to fat added in cooking
58161452	Rice, brown, with tomatoes, fat not added in cooking
58161454	Rice, brown, with tomatoes, fat added in cooking
58161710	Rice croquette

Mixed Foods containing Cereal grains, prepared

Adjusted for cereal grains, prepared content of up to 39%

[Magnesium L-Threonate] = up to 0.048%

13210260	Rice flour cream, Puerto Rican style (Majarete, manjar blanco)
13210410	Pudding, rice
13210450	Pudding, rice flour, with nuts (Indian dessert)
27115000	Beef with soy-based sauce (mixture)
27115100	Steak teriyaki with sauce (mixture)
27120150	Pork or ham with soy-based sauce (mixture)
27135020	Veal scallopini
27141000	Chicken or turkey cacciatore
27145000	Chicken or turkey teriyaki (chicken or turkey with soy-based sauce)
27146350	Lemon chicken, Chinese style
27150160	Shrimp with lobster sauce (mixture)
27150190	Lobster sauce (broth-based)
27150410	Shrimp teriyaki (shrimp with soy-based sauce) (mixture)
27213100	Beef and rice with tomato-based sauce (mixture)
27213120	Porcupine balls with tomato-based sauce (mixture)
27213150	Chili con carne with beans and rice
27213300	Beef and rice with cream sauce (mixture)
27213400	Beef and rice with (mushroom) soup (mixture)
27213420	Porcupine balls with (mushroom) soup (mixture)
27213500	Beef and rice with soy-based sauce (mixture)
27220030	Ham and rice with (mushroom) soup (mixture)
27220150	Sausage and rice with (mushroom) soup (mixture)
27220170	Sausage and rice with cheese sauce (mixture)

27243300	Chicken or turkey and rice with cream sauce (mixture)
27243400	Chicken or turkey and rice with (mushroom) soup (mixture)
27243500	Chicken or turkey and rice with tomato-based sauce (mixture)
27243600	Chicken or turkey and rice with soy-based sauce (mixture)
27250710	Tuna and rice with (mushroom) soup (mixture)
27250810	Fish and rice with tomato-based sauce
27250820	Fish and rice with cream sauce
27250830	Fish and rice with (mushroom) soup
27315010	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce (mixture)
27315020	Beef, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce (mixture)
27315210	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27315220	Beef, rice, and vegetables (excluding carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27315250	Stuffed cabbage rolls with beef and rice
27315270	Stuffed grape leaves with beef and rice
27315310	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), (mushroom) soup (mixture)
27315320	Beef, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), (mushroom) soup (mixture)
27315410	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), gravy (mixture)
27315420	Beef, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), gravy (mixture)
27315510	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), soy-based sauce (mixture)
27315520	Beef, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), soy-based sauce (mixture)
27320320	Pork, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), soy-based sauce (mixture)
27320330	Pork, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), soy-based sauce (mixture)
27320340	Pork, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27320350	Pork, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), tomato-based sauce (mixture)
27320500	Sweet and sour pork with rice
27330050	Lamb or mutton, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), gravy (mixture)
27330060	Lamb or mutton, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27330080	Lamb or mutton, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), gravy
27330170	Stuffed grape leaves with lamb and rice
27345010	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce (mixture)
27345020	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce (mixture)
27345210	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), gravy (mixture)
27345220	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), gravy (mixture)

27345310	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), soy-based sauce (mixture)
27345320	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), soy-based sauce (mixture)
27345410	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), (mushroom) soup (mixture)
27345420	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), (mushroom) soup (mixture)
27345440	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), cheese sauce (mixture)
27345450	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), cheese sauce (mixture)
27345510	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27345520	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), tomato-based sauce (mixture)
27350020	Paella with seafood
27350040	Shad creole, with rice
27350060	Shrimp creole, with rice
27360090	Paella, NFS
27363000	Gumbo with rice (New Orleans type with shellfish, pork, and/or poultry, tomatoes, okra, rice)
27363100	Jambalaya with meat and rice
27415120	Beef, tofu, and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-based sauce (mixture)
27415220	Beef, tofu, and vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)), soy-based sauce (mixture)
27420100	Pork, tofu, and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-base sauce (mixture)
27420150	Kung Pao pork
27420370	Pork, tofu, and vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)), soy-based sauce (mixture)
27445220	Kung pao chicken
41210120	Stewed white beans, Puerto Rican style
58100155	Burrito with beef, rice, and cheese
58100160	Burrito with beef, beans, rice, and cheese
58100250	Burrito with chicken, rice, and cheese
58100255	Burrito with chicken, beans, rice, and cheese
58100300	Burrito with beans and rice, meatless
58100330	Burrito with rice, beans, cheese, sour cream, lettuce, tomato and guacamole, meatless
58101200	Flauta, NFS
58101230	Flauta with beef
58101240	Flauta with chicken
58101800	Ground beef with tomato sauce and taco seasonings on a cornbread crust
58104600	Chimichanga with beef and rice
58151100	Sushi, NFS
58151120	Sushi, with vegetables, no seafood (no fish or shellfish)
58151130	Sushi, with vegetables and seafood
58151150	Sushi, with seafood, no vegetables
58151160	Sushi, with egg, no vegetables, no seafood (no fish or shellfish), rolled in seaweed
58155110	Rice with chicken, Puerto Rican style (Arroz con Pollo)
58155210	Stuffed rice with chicken, Dominican style (Arroz relleno Dominicano)
58155310	Paella, Valenciana style, with meat (Paella Valenciana)
58155320	Seafood paella, Puerto Rican style

58155410	Soupy rice with chicken, Puerto Rican style (Asopao de pollo)
58155510	Soupy rice mixture with chicken and potatoes, Puerto Rican style
58155610	Rice meal fritter, Puerto Rican style (Almojabana)
58155810	Stewed rice, Puerto Rican style (arroz guisado)
58155910	Rice with squid, Puerto Rican style (arroz con calamares)
58156110	Fried rice, Puerto Rican style (arroz frito)
58156210	Rice with vienna sausage, Puerto Rican style (arroz con salchichas)
58156310	Rice with Spanish sausage, Puerto Rican style
58156410	Rice with onions, Puerto Rican style (arroz con cebollas)
58156510	Soupy rice from Puerto Rican style Asopao de Pollo (chicken parts reported separately)
58157110	Spicy rice pudding, Puerto Rican style
58157210	Rice pudding made with coconut milk, Puerto Rican style
58160120	Rice with beans and tomatoes
58160130	Rice with beans and chicken
58160135	Rice with beans and beef
58160140	Rice with beans and pork
58160150	Red beans and rice
58161110	Rice casserole with cheese
58161200	Rice, cooked with coconut milk (Arroz con coco)
58161510	Grape leaves stuffed with rice
58162090	Stuffed pepper, with meat
58162110	Stuffed pepper, with rice and meat
58162120	Stuffed pepper, with rice, meatless
58162130	Stuffed tomato, with rice and meat
58162140	Stuffed tomato, with rice, meatless
58162310	Rice pilaf
58163130	Dirty rice
58163310	Flavored rice mixture
58163330	Flavored rice mixture with cheese
58163360	Flavored rice, brown and wild
58163380	Flavored rice and pasta mixture
58163400	Flavored rice and pasta mixture, reduced sodium
58163410	Spanish rice
58163450	Spanish rice with ground beef
58163510	Rice dressing
58163610	Rice-vegetable medley
58164210	Rice dessert or salad with fruit
58175110	Tabbouleh (bulgar with tomatoes and parsley)
58200100	Wrap sandwich, filled with meat, poultry, or fish, vegetables, and rice
58200200	Wrap sandwich, filled with vegetables and rice
58200300	Wrap sandwich, filled with meat, poultry, or fish, vegetables, rice, and cheese
72202020	Broccoli casserole (broccoli, rice, cheese, and mushroom sauce)
75414020	Mushrooms, stuffed
75418030	Squash, summer, casserole, with rice and tomato sauce
75439500	Chop suey, meatless
75440170	Vegetable sticks, breaded (including corn, carrots, and green beans)
77316510	Stuffed cabbage, with meat and rice, Syrian dish, Puerto Rican style (Repollo relleno con carne y con arroz; Arabe Mihsy Melful)

Granola, Meal Replacement, and Breakfast Bars

[Magnesium L-Threonate] = 0.12%

53540000	Breakfast bar, NFS
53540200	Breakfast bar, cereal crust with fruit filling, lowfat

53540300	Fiber One Chewy Bar
53540400	Kellogg's Nutri-Grain Cereal Bar
53540402	Kellogg's Nutri-Grain Yogurt Bar
53540404	Kellogg's Nutri-Grain Fruit and Nut Bar
53540500	Breakfast bar, date, with yogurt coating
53540600	Milk 'n Cereal bar
53540700	Kellogg's Special K bar
53540800	Kashi GOLEAN Chewy Bars
53540802	Kashi TLC Chewy Granola Bar
53540804	Kashi GOLEAN Crunchy Bars
53540806	Kashi TLC Crunchy Granola Bar
53540900	Nature Valley Chewy Trail Mix Granola Bar
53540902	Nature Valley Chewy Granola Bar with Yogurt Coating
53540904	Nature Valley Sweet and Salty Nut Granola Bar
53540906	Nature Valley Crunchy Granola Bar
53541000	Quaker Chewy Granola Bar
53541002	Quaker Chewy 90 Calorie Granola Bar
53541004	Quaker Chewy 25% Less Sugar Granola Bar
53541006	Quaker Chewy Dipps Granola Bar
53541200	Meal replacement bar
53541300	Slim Fast Original Meal Bar
53542000	Snack bar, oatmeal
53542100	Granola bar, NFS
53542200	Granola bar, lowfat, NFS
53542210	Granola bar, nonfat
53543000	Granola bar, reduced sugar, NFS
53543100	Granola bar, peanuts, oats, sugar, wheat germ
53544200	Granola bar, chocolate-coated, NFS
53544210	Granola bar, with coconut, chocolate-coated
53544220	Granola bar with nuts, chocolate-coated
53544230	Granola bar, oats, nuts, coated with non-chocolate coating
53544250	Granola bar, coated with non-chocolate coating
53544300	Granola bar, high fiber, coated with non-chocolate yogurt coating
53544400	Granola bar, with rice cereal
53544410	Quaker Granola Bites
53544450	PowerBar (fortified high energy bar)

Pastas and Noodles

[Magnesium L-Threonate] = 0.12%

56101000	Macaroni, cooked, NS as to fat added in cooking
56101010	Macaroni, cooked, fat not added in cooking
56101030	Macaroni, cooked, fat added in cooking
56102000	Macaroni, whole wheat, cooked, NS as to fat added in cooking
56102010	Macaroni, whole wheat, cooked, fat not added in cooking
56102020	Macaroni, whole wheat, cooked, fat added in cooking
56103000	Macaroni, cooked, spinach, NS as to fat added in cooking
56103010	Macaroni, cooked, spinach, fat not added in cooking
56103020	Macaroni, cooked, spinach, fat added in cooking
56104000	Macaroni, cooked, vegetable, NS as to fat added in cooking
56104010	Macaroni, cooked, vegetable, fat not added in cooking
56104020	Macaroni, cooked, vegetable, fat added in cooking
56112000	Noodles, cooked, NS as to fat added in cooking
56112010	Noodles, cooked, fat not added in cooking

56112030	Noodles, cooked, fat added in cooking
56113000	Noodles, cooked, whole wheat, NS as to fat added in cooking
56113010	Noodles, cooked, whole wheat, fat not added in cooking
56113990	Noodles, cooked, spinach, NS as to fat added in cooking
56114000	Noodles, cooked, spinach, fat not added in cooking
56114020	Noodles, cooked, spinach, fat added in cooking
56116000	Noodles, chow mein
56116990	Long rice noodles (made from mung beans) cooked, NS as to fat added in cooking
56117000	Long rice noodles (made from mung beans), cooked, fat not added in cooking
56117010	Long rice noodles (made from mung beans), cooked, fat added in cooking
56117090	Chow fun rice noodles, cooked, NS as to fat added in cooking
56117100	Chow fun rice noodles, cooked, fat not added in cooking
56117110	Chow fun rice noodles, cooked, fat added in cooking
56130000	Spaghetti, cooked, NS as to fat added in cooking
56130010	Spaghetti, cooked, fat not added in cooking
56131000	Spaghetti, cooked, fat added in cooking
56132000	Spaghetti, cooked, high protein type (assume no fat added)
56132990	Spaghetti, cooked, whole wheat, NS as to fat added in cooking
56133000	Spaghetti, cooked, whole wheat, fat not added in cooking
56133010	Spaghetti, cooked, whole wheat, fat added in cooking
58122210	Gnocchi, cheese
58122220	Gnocchi, potato
58131100	Ravioli, NS as to filling, no sauce
58131310	Ravioli, meat-filled, no sauce
58131510	Ravioli, cheese-filled, no sauce
58131590	Ravioli, cheese and spinach-filled, no sauce
58133110	Manicotti, cheese-filled, no sauce
58134110	Stuffed shells, cheese-filled, no sauce
58134160	Stuffed shells, cheese- and spinach- filled, no sauce
58134650	Tortellini, meat-filled, no sauce
58134680	Tortellini, cheese-filled, no sauce
58134720	Tortellini, spinach-filled, no sauce
58134810	Cannelloni, cheese- and spinach-filled, no sauce
58301020	Lasagna with cheese and sauce (diet frozen meal)
58301030	Veal lasagna (diet frozen meal)
58301050	Lasagna with cheese and meat sauce (diet frozen meal)
58301080	Lasagna with cheese and meat sauce, reduced fat and sodium (diet frozen meal)
58301110	Vegetable lasagna (frozen meal)
58301150	Zucchini lasagna (diet frozen meal)
58302000	Macaroni and cheese (diet frozen meal)
58302030	Macaroni with veal, cheese, and sauce (diet frozen meal)
58302050	Beef and noodles with meat sauce and cheese (diet frozen meal)
58302060	Spaghetti or noodles with beef in tomato-based sauce, lowfat, reduced sodium (diet frozen meal)
58302080	Noodles with vegetables in tomato-based sauce (diet frozen meal)
58304010	Spaghetti and meatballs dinner, NFS (frozen meal)
58304020	Spaghetti and meatballs with tomato sauce, sliced apples, bread (frozen meal)
58304050	Spaghetti with meat and mushroom sauce (diet frozen meal)
58304060	Spaghetti with meat sauce (diet frozen meal)
58304200	Ravioli, cheese-filled, with tomato sauce (diet frozen meal)
58304220	Rigatoni with meat sauce and cheese (diet frozen meal)
58304230	Ravioli, cheese-filled, with vegetable and fruit (frozen meal)
58304250	Manicotti, cheese-filled, with tomato sauce (diet frozen meal)
58304300	Cannelloni, cheese-filled, with tomato sauce (diet frozen meal)

58304400	Linguini with vegetables and seafood in white wine sauce (diet frozen meal)
58305010	Mosticcoli with meatballs, sauce, bread (frozen meal)
58305250	Pasta with vegetable and cheese sauce (diet frozen meal)
58307010	Beef and pork cannelloni (diet frozen meal)

Mixed Foods containing Pastas and Noodles

Adjusted for pasta and noodle content of 40 to 70%

[Magnesium L-Threonate] = 0.048 to 0.084%

58130011	Lasagna with meat
58130013	Lasagna with meat, canned
58130020	Lasagna with meat and spinach
58130140	Lasagna with chicken or turkey
58130150	Lasagna, with chicken or turkey, and spinach
58130310	Lasagna, meatless
58130320	Lasagna, meatless, with vegetables
58130610	Lasagna with meat, whole wheat noodles
58130810	Lasagna, meatless, whole wheat noodles
58130910	Lasagna with meat, spinach noodles
58130950	Lasagna, meatless, spinach noodles
58131110	Ravioli, NS as to filling, with tomato sauce
58131120	Ravioli, NS as to filling, with cream sauce
58131320	Ravioli, meat-filled, with tomato sauce or meat sauce
58131323	Ravioli, meat-filled, with tomato sauce or meat sauce, canned
58131330	Ravioli, meat-filled, with cream sauce
58131520	Ravioli, cheese-filled, with tomato sauce
58131523	Ravioli, cheese-filled, with tomato sauce, canned
58131530	Ravioli, cheese-filled, with meat sauce
58131535	Ravioli, cheese-filled, with cream sauce
58131600	Ravioli, cheese and spinach-filled, with cream sauce
58131610	Ravioli, cheese and spinach filled, with tomato sauce
58132110	Spaghetti with tomato sauce, meatless
58132113	Pasta with tomato sauce and cheese, canned
58132350	Spaghetti with tomato sauce, meatless, whole wheat noodles
58132800	Spaghetti with clam sauce, NS as to red or white
58132810	Spaghetti with red clam sauce
58132820	Spaghetti with white clam sauce
58133120	Manicotti, cheese-filled, with tomato sauce, meatless
58133140	Manicotti, vegetable- and cheese-filled, with tomato sauce, meatless
58134120	Stuffed shells, cheese-filled, with tomato sauce, meatless
58134130	Stuffed shells, cheese-filled, with meat sauce
58134210	Stuffed shells, with chicken, with tomato sauce
58134310	Stuffed shells, with fish and/or shellfish, with tomato sauce
58134610	Tortellini, meat-filled, with tomato sauce
58134613	Tortellini, meat-filled, with tomato sauce, canned
58134620	Tortellini, cheese-filled, meatless, with tomato sauce
58134623	Tortellini, cheese-filled, meatless, with tomato sauce, canned
58134630	Tortellini, cheese-filled, meatless, with vegetables and vinaigrette dressing
58134640	Tortellini, cheese-filled, meatless, with vinaigrette dressing
58134660	Tortellini, cheese-filled, with cream sauce
58134710	Tortellini, spinach-filled, with tomato sauce
58135120	Chow fun noodles with vegetables, meatless
58136110	Lo mein, NFS
58136120	Lo mein, meatless

58137210	Pad Thai, NFS
58137220	Pad Thai, meatless
58145113	Macaroni or noodles with cheese, canned
58145114	Macaroni or noodles with cheese, made from dry mix
58145115	Macaroni or noodles with cheese, from boxed mix with already prepared cheese sauce
58146100	Pasta with tomato sauce, meatless
58146110	Pasta with meat sauce
58146120	Pasta with cheese and meat sauce
58146130	Pasta with carbonara sauce
58146150	Pasta with cheese and tomato sauce, meatless
58146160	Pasta with vegetables, no sauce or dressing
58146200	Pasta, meat-filled, with gravy, canned
58146300	Pasta, whole wheat, with meat sauce
58146310	Pasta, whole wheat, with tomato sauce, meatless
58147100	Pasta with pesto sauce
58147310	Macaroni, creamed
58147330	Macaroni, creamed, with cheese
58148600	Pasta tetrazzini, dry mix, prepared with water
58149110	Noodle pudding
58149160	Noodle pudding, with milk

Mixed Foods containing Pastas and Noodles

Adjusted for pasta and noodle content of up to 35%

[Magnesium L-Threonate] = up to 0.042%

58132310	Spaghetti with tomato sauce and meatballs or spaghetti with meat sauce or spaghetti with meat sauce and meatballs
58132313	Pasta with tomato sauce and meat or meatballs, canned
58132340	Spaghetti with tomato sauce and vegetables
58132360	Spaghetti with tomato sauce and meatballs, whole wheat noodles or spaghetti with meat sauce, whole wheat noodles or spaghetti
58132450	Spaghetti with tomato sauce, meatless, made with spinach noodles
58132460	Spaghetti with tomato sauce and meatballs made with spinach noodles, or spaghetti with meat sauce made with spinach noodles
58132710	Spaghetti with tomato sauce and frankfurters or hot dogs
58132713	Pasta with tomato sauce and frankfurters or hot dogs, canned
58132910	Spaghetti with tomato sauce and poultry
58133130	Manicotti, cheese-filled, with meat sauce
58135110	Chow fun noodles with meat and vegetables
58136130	Lo mein, with shrimp
58136140	Lo mein, with pork
58136150	Lo mein, with beef
58136160	Lo mein, with chicken
58137230	Pad Thai with chicken
58137240	Pad Thai with seafood
58137250	Pad Thai with meat
58140110	Spaghetti with corned beef, Puerto Rican style
58140310	Macaroni with tuna, Puerto Rican style (Macarrones con atun)
58145110	Macaroni or noodles with cheese
58145120	Macaroni or noodles with cheese and tuna
58145130	Macaroni or noodles with cheese and beef
58145140	Macaroni or noodles with cheese and tomato
58145150	Macaroni or noodles with cheese and pork or ham
58145160	Macaroni or noodles with cheese and frankfurters or hot dogs

58145170	Macaroni and cheese with egg
58145190	Macaroni or noodles with cheese and chicken or turkey
58147110	Macaroni or noodles with beans or lentils and tomato sauce
58147340	Macaroni, creamed, with cheese and tuna
58147350	Macaroni, creamed, with vegetables
58147510	Flavored pasta
58147520	Yat Ga Mein with meat, fish, or poultry
58148110	Macaroni or pasta salad
58148120	Macaroni or pasta salad with egg
58148130	Macaroni or pasta salad with tuna
58148140	Macaroni or pasta salad with crab meat
58148150	Macaroni or pasta salad with shrimp
58148160	Macaroni or pasta salad with tuna and egg
58148170	Macaroni or pasta salad with chicken
58148180	Macaroni or pasta salad with cheese
58148550	Macaroni or pasta salad with meat
58149210	Somen salad with noodles, lettuce, egg, fish, and pork

Hard Candy

Hard Candy

[Magnesium L-Threonate] = 0.12%

91701020	Almonds, sugar-coated
91701030	Almonds, yogurt-covered
91718000	Honey-combed hard candy with peanut butter
91718050	Honey-combed hard candy with peanut butter, chocolate covered
91728500	Sugared pecans (sugar and egg white coating)
91731100	Peanuts, sugar-coated
91731150	Peanuts, yogurt covered
91733000	Peanut brittle
91735000	Pralines
91742010	Sesame Crunch (Sahadi)
91745020	Hard candy
91745040	Butterscotch hard candy
91770020	Dietetic or low calorie hard candy
91770050	Dietetic or low calorie mints

Meat Products

Processed Meat

[Magnesium L-Threonate] = 0.12%

21416000	Corned beef, cooked, NS as to fat eaten
21416110	Corned beef, cooked, lean and fat eaten
21416120	Corned beef, cooked, lean only eaten
21416150	Corned beef, canned, ready-to-eat
21601000	Beef, bacon, cooked
21601500	Beef, bacon, formed, lean meat added, cooked
21602000	Beef, dried, chipped, uncooked
21602010	Beef, dried, chipped, cooked in fat
21602100	Beef jerky
21603000	Beef, pastrami (beef, smoked, spiced)
22001000	Pork, pickled, NS as to cut

22002800	Pork jerky
22311000	Ham, smoked or cured, cooked, NS as to fat eaten
22311010	Ham, smoked or cured, cooked, lean and fat eaten
22311020	Ham, smoked or cured, cooked, lean only eaten
22311200	Ham, smoked or cured, low sodium, cooked, NS as to fat eaten
22311210	Ham, smoked or cured, low sodium, cooked, lean and fat eaten
22311220	Ham, smoked or cured, low sodium, cooked, lean only eaten
22311450	Ham, prosciutto
22311500	Ham, smoked or cured, canned, NS as to fat eaten
22311510	Ham, smoked or cured, canned, lean and fat eaten
22311520	Ham, smoked or cured, canned, lean only eaten
22321110	Ham, smoked or cured, ground patty
22421000	Pork roast, smoked or cured, cooked, NS as to fat eaten
22421010	Pork roast, smoked or cured, cooked, lean and fat eaten
22421020	Pork roast, smoked or cured, cooked, lean only eaten
22431000	Pork roll, cured, fried
22501010	Canadian bacon, cooked
22600100	Bacon, NS as to type of meat, cooked
22600200	Pork bacon, NS as to fresh, smoked or cured, cooked
22601000	Pork bacon, smoked or cured, cooked
22601040	Bacon or side pork, fresh, cooked
22602010	Pork bacon, smoked or cured, lower sodium
22605010	Pork bacon, formed, lean meat added, cooked
22621000	Salt pork, cooked
22621100	Fat back, cooked
24203120	Turkey, wing, smoked, cooked, skin eaten
24206000	Turkey, canned
24208500	Turkey bacon, cooked
25160110	Tongue, smoked, cured, or pickled, cooked
25210110	Frankfurter, wiener, or hot dog, NFS
25210120	Frankfurter or hot dog, breaded, baked
25210150	Frankfurter or hot dog, cheese-filled
25210160	Frankfurter or hot dog, bacon and cheese-filled
25210170	Frankfurter or hot dog, chili-filled
25210210	Frankfurter or hot dog, beef
25210220	Frankfurter or hot dog, beef and pork
25210230	Frankfurter or hot dog, beef and pork, lowfat
25210250	Frankfurter or hot dog, meat and poultry, fat free
25210280	Frankfurter or hot dog, meat and poultry
25210310	Frankfurter or hot dog, chicken
25210410	Frankfurter or hot dog, turkey
25210510	Frankfurter or hot dog, low salt
25210610	Frankfurter or hot dog, beef, lowfat
25210700	Frankfurter or hot dog, meat & poultry, lowfat
25220010	Cold cut, NFS
25220100	Beef sausage, NFS
25220110	Beef sausage, brown and serve, links, cooked
25220120	Beef sausage, smoked, stick
25220130	Beef sausage, smoked
25220140	Beef sausage, fresh, bulk, patty or link, cooked
25220150	Beef sausage with cheese, smoked
25220210	Blood sausage
25220310	Bockwurst
25220350	Bratwurst, pork, cooked

25220360	Bratwurst, with cheese
25220370	Bratwurst, beef, cooked
25220390	Bologna, beef, lowfat
25220400	Bologna, pork and beef
25220410	Bologna, NFS
25220420	Bologna, Lebanon
25220430	Bologna, beef
25220440	Bologna, turkey
25220450	Bologna ring, smoked
25220460	Bologna, pork
25220470	Bologna, beef, lower sodium
25220480	Bologna, chicken, beef, and pork
25220490	Bologna, with cheese
25220500	Bologna, beef and pork, lowfat
25220510	Capicola
25220610	Cervelat, soft
25220650	Chicken and beef sausage, smoked
25220710	Chorizos
25220910	Head cheese
25221110	Knockwurst
25221210	Mortadella
25221250	Pepperoni
25221310	Polish sausage
25221350	Italian sausage
25221400	Sausage (not cold cut), NFS
25221410	Pork sausage, fresh, bulk, patty or link, cooked
25221420	Pork sausage, brown and serve, cooked
25221430	Pork sausage, country style, fresh, cooked
25221450	Pork sausage rice links, brown and serve, cooked
25221460	Pork and beef sausage
25221470	Pork and beef sausage, brown and serve, cooked
25221480	Mettwurst
25221500	Salami, NFS
25221510	Salami, soft, cooked
25221520	Salami, dry or hard
25221530	Salami, beef
25221610	Scrapple, cooked
25221650	Smoked link sausage, pork
25221660	Smoked link sausage, pork and beef
25221680	Smoked sausage, pork
25221710	Souse
25221810	Thuringer
25221840	Turkey breakfast sausage, bulk, patty or link, cooked
25221850	Turkey sausage, smoked
25221860	Turkey sausage, reduced fat, brown and serve, cooked
25221870	Turkey and pork sausage, fresh, bulk, patty or link, cooked
25221880	Turkey, pork, and beef sausage, reduced fat, smoked
25221890	Turkey, pork, and beef sausage, lowfat, smoked
25221910	Vienna sausage, canned
25221950	Pickled sausage
25230110	Luncheon meat, NFS
25230210	Ham, sliced, prepackaged or deli, luncheon meat
25230220	Ham, sliced, low salt, prepackaged or deli, luncheon meat
25230230	Ham, sliced, extra lean, prepackaged or deli, luncheon meat

25230310	Chicken or turkey loaf, prepackaged or deli, luncheon meat
25230410	Ham loaf, luncheon meat
25230430	Ham and cheese loaf
25230450	Honey loaf
25230510	Ham, luncheon meat, chopped, minced, pressed, spiced, not canned
25230520	Ham, luncheon meat, chopped, minced, pressed, spiced, lowfat, not canned
25230530	Ham and pork, luncheon meat, chopped, minced, pressed, spiced, canned
25230540	Ham, pork and chicken, luncheon meat, chopped, minced, pressed, spiced, canned
25230550	Ham, pork, and chicken, luncheon meat, chopped, minced, pressed, spiced, canned, reduced sodium
25230560	Liverwurst
25230610	Luncheon loaf (olive, pickle, or pimiento)
25230710	Sandwich loaf, luncheon meat
25230790	Turkey ham, sliced, extra lean, prepackaged or deli, luncheon meat
25230800	Turkey ham
25230810	Veal loaf
25230820	Turkey pastrami
25230840	Turkey salami
25230900	Turkey or chicken breast, prepackaged or deli, luncheon meat
25230905	Turkey or chicken breast, low salt, prepackaged or deli, luncheon meat
25231110	Beef, sliced, prepackaged or deli, luncheon meat
25231150	Corned beef, pressed
25240000	Meat spread or potted meat, NFS
25240110	Chicken salad spread
25240210	Ham, deviled or potted
25240220	Ham salad spread
25240310	Roast beef spread
25240320	Corned beef spread
28101000	Frozen dinner, NFS
28110000	Beef dinner, NFS (frozen meal)
28110120	Beef with potatoes (frozen meal, large meat portion)
28110150	Beef with vegetable (diet frozen meal)
28110200	Sirloin, chopped, dinner, NFS (frozen meal)
28110220	Sirloin, chopped, with gravy, mashed potatoes, vegetable (frozen meal)
28110250	Sirloin tips with gravy, potatoes, vegetable (frozen meal)
28110270	Sirloin beef with gravy, potatoes, vegetable (frozen meal)
28110300	Salisbury steak dinner, NFS (frozen meal)
28110310	Salisbury steak with gravy, potatoes, vegetable (frozen meal)
28110330	Salisbury steak with gravy, whipped potatoes, vegetable, dessert (frozen meal)
28110340	Salisbury steak with gravy, potatoes, vegetable, soup or macaroni and cheese, dessert (frozen meal)
28110350	Salisbury steak with gravy, potatoes, vegetable, dessert (frozen meal, large meat portion)
28110370	Salisbury steak with gravy, macaroni and cheese, vegetable (frozen meal)
28110380	Salisbury steak with gravy, macaroni and cheese (frozen meal)
28110390	Salisbury steak, potatoes, vegetable, dessert (diet frozen meal)
28110510	Beef, sliced, with gravy, potatoes, vegetable (frozen meal)
28110620	Beef short ribs, boneless, with barbecue sauce, potatoes, vegetable (frozen meal)
28110640	Meatballs, Swedish, in sauce, with noodles (frozen meal)
28110660	Meatballs, Swedish, in gravy, with noodles (diet frozen meal)
28111010	Corned beef hash with apple slices, vegetable (frozen meal)
28113110	Salisbury steak, baked, with tomato sauce, vegetable (diet frozen meal)
28113140	Beef with spaetzle or rice, vegetable (frozen meal)
28120310	Pork with rice, vegetable, in soy-based sauce (diet frozen meal)
28130000	Veal dinner, NFS (frozen meal)

28133110	Veal, breaded, with spaghetti, in tomato sauce (frozen meal)
28133210	Veal parmigiana with vegetable (diet frozen meal)
28133220	Veal with peppers in sauce, rice (diet frozen meal)
28133340	Veal parmigiana with vegetable, fettuccine alfredo, dessert (frozen meal)
28140100	Chicken dinner, NFS (frozen meal)
28140150	Chicken divan (frozen meal)
28140250	Chicken, boneless, with gravy, dressing, rice, vegetable, dessert (frozen meal, large meat portion)
28140320	Chicken and noodles with vegetable, dessert (frozen meal)
28140710	Chicken, fried, with potatoes, vegetable (frozen meal)
28140720	Chicken patty, or nuggets, boneless, breaded, potatoes, vegetable (frozen meal)
28140730	Chicken patty, breaded, with tomato sauce and cheese, fettuccine alfredo, vegetable (frozen meal)
28140740	Chicken patty, or nuggets, boneless, breaded, with pasta and tomato sauce, fruit, dessert (frozen meal)
28140810	Chicken, fried, with potatoes, vegetable, dessert (frozen meal)
28140910	Chicken, fried, with potatoes, vegetable, cornbread, dessert (frozen meal)
28140920	Chicken, fried, with potatoes, vegetable, vegetable soup, dessert (frozen meal)
28141010	Chicken, fried, with potatoes, vegetable, dessert (frozen meal, large meat portion)
28141050	Chicken patty parmigiana, breaded, with vegetable (diet frozen meal)
28141201	Teriyaki chicken with rice and vegetable (diet frozen meal)
28141250	Chicken with rice-vegetable mixture (diet frozen meal)
28141300	Chicken with rice and vegetable, reduced fat and sodium (diet frozen meal)
28141600	Chicken a la king with rice (frozen meal)
28141610	Chicken and vegetables in cream or white sauce (diet frozen meal)
28141630	Chicken cordon bleu with vegetable, rice (frozen meal)
28141640	Chicken kiev with rice-vegetable mixture (frozen meal)
28141650	Chicken and vegetables au gratin with rice-vegetable mixture (diet frozen entree)
28143010	Chicken and vegetable entree with rice, Oriental (frozen meal)
28143020	Chicken and vegetable entree with rice, Oriental (diet frozen meal)
28143030	Chicken and vegetable entree, oriental (diet frozen meal)
28143040	Chicken chow mein with rice (diet frozen meal)
28143050	Chicken chow mein with rice, reduced fat and sodium (diet frozen meal)
28143080	Chicken with noodles and cheese sauce (diet frozen meal)
28143110	Chicken cacciatore with noodles (diet frozen meal)
28143130	Chicken and vegetable entree with noodles (frozen meal)
28143150	Chicken and vegetable entree with noodles (diet frozen meal)
28143170	Chicken in cream sauce with noodles and vegetable (frozen meal)
28143180	Chicken in butter sauce with potatoes and vegetable (diet frozen meal)
28143190	Chicken in mushroom sauce, white and wild rice, vegetable (frozen meal)
28143200	Chicken in soy-based sauce, rice and vegetables (frozen meal)
28143210	Chicken in orange sauce with almond rice (diet frozen meal)
28143220	Chicken in barbecue sauce, with rice, vegetable and dessert, reduced fat and sodium (diet frozen meal)
28144100	Chicken and vegetable entree with noodles and cream sauce (frozen meal)
28145000	Turkey dinner, NFS (frozen meal)
28145100	Turkey with dressing, gravy, vegetable and fruit (diet frozen meal)
28145110	Turkey with vegetable, stuffing (diet frozen meal)
28145210	Turkey with gravy, dressing, potatoes, vegetable (frozen meal)
28145610	Turkey with gravy, dressing, potatoes, vegetable, dessert (frozen meal, large meat portion)
28145710	Turkey tetrazzini (frozen meal)
28150000	Fish dinner, NFS (frozen meal)
28150210	Haddock with chopped spinach (diet frozen meal)

28150220	Flounder with chopped broccoli (diet frozen meal)
28150230	Turbot with vegetable (diet frozen meal)
28150240	Sole with vegetable (diet frozen meal)
28150370	Flounder in cream sauce with potatoes, carrots (diet frozen meal)
28150510	Fish in lemon-butter sauce with starch item, vegetable (frozen meal)
28150650	Fish, breaded, or fish sticks, with pasta, vegetable and dessert (frozen meal)
28150810	Scallops with potatoes, vegetable (frozen meal)
28150910	Shrimp with potatoes, vegetable (frozen meal)
28152030	Seafood newburg with rice, vegetable (frozen meal)
28152050	Shrimp with rice, vegetable (frozen meal)
28153010	Shrimp and clams in tomato-based sauce, with noodles (frozen meal)
28154010	Shrimp and vegetables in sauce with noodles (diet frozen meal)
28160300	Meat loaf dinner, NFS (frozen meal)
28160310	Meat loaf with potatoes, vegetable (frozen meal)
28160650	Stuffed green pepper (frozen meal)
28160660	Stuffed green pepper (diet frozen meal)
28160710	Stuffed cabbage, with meat and tomato sauce (diet frozen meal)
28160810	Livers, chicken, with vegetable (diet frozen meal)
58122250	Kishke, stuffed derma

Mixed Foods containing Processed Meat

Adjusted for processed meat content of 40 to 50%

[Magnesium L-Threonate] = 0.048 to 0.06%

27500050	Sandwich, NFS
27500100	Meat sandwich, NFS
27500200	Wrap sandwich, filled with meat, poultry, or fish, vegetables, and cheese
27500300	Wrap sandwich, filled with meat, poultry, or fish, and vegetables
27510000	Beef sandwich, NFS
27510110	Beef barbecue sandwich or Sloppy Joe, on bun
27510130	Beef barbecue submarine sandwich, on bun
27510210	Cheeseburger, plain, on bun
27510220	Cheeseburger, with mayonnaise or salad dressing, on bun
27510230	Cheeseburger, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510240	Cheeseburger, 1/4 lb meat, plain, on bun
27510250	Cheeseburger, 1/4 lb meat, with mayonnaise or salad dressing, on bun
27510260	Cheeseburger, 1/4 lb meat, with mushrooms in sauce, on bun
27510270	Double cheeseburger (2 patties), plain, on bun
27510280	Double cheeseburger (2 patties), with mayonnaise or salad dressing, on bun
27510290	Double cheeseburger (2 patties), plain, on double-decker bun
27510300	Double cheeseburger (2 patties), with mayonnaise or salad dressing, on double-decker bun
27510310	Cheeseburger with tomato and/or catsup, on bun
27510311	Cheeseburger, 1 oz meat, plain, on miniature bun
27510320	Cheeseburger, 1/4 lb meat, with tomato and/or catsup, on bun
27510330	Double cheeseburger (2 patties), with tomato and/or catsup, on bun
27510340	Double cheeseburger (2 patties), with mayonnaise or salad dressing and tomatoes, on bun
27510350	Cheeseburger, 1/4 lb meat, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510355	Cheeseburger, 1/3 lb meat, with mayonnaise or salad dressing, tomato and/or catsup on bun
27510360	Bacon cheeseburger, with mayonnaise or salad dressing, tomato and/or catsup, on bun

27510370	Double cheeseburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing, on bun
27510375	Double cheeseburger (2 patties, 1/4 lb meat each), with tomato and/or catsup, on bun
27510380	Triple cheeseburger (3 patties, 1/4 lb meat each), with mayonnaise or salad dressing and tomatoes, on bun
27510390	Double bacon cheeseburger (2 patties, 1/4 lb meat each), on bun
27510400	Bacon cheeseburger, 1/4 lb meat, with tomato and/or catsup, on bun
27510410	Chiliburger, on bun
27510420	Taco burger, on bun
27510425	Double bacon cheeseburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing, on bun
27510430	Double bacon cheeseburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510435	Double bacon cheeseburger (2 patties, 1/3 lb meat each), with mayonnaise or salad dressing, on bun
27510440	Bacon cheeseburger, 1/4 lb meat, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510450	Cheeseburger, 1/4 lb meat, with ham, on bun
27510480	Cheeseburger (hamburger with cheese sauce), 1/4 lb meat, with grilled onions, on rye bun
27510500	Hamburger, plain, on bun
27510510	Hamburger, with tomato and/or catsup, on bun
27510520	Hamburger, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510530	Hamburger, 1/4 lb meat, plain, on bun
27510540	Double hamburger (2 patties), with tomato and/or catsup, on bun
27510550	Double hamburger (2 patties), with mayonnaise or salad dressing and tomatoes, on double-decker bun
27510560	Hamburger, 1/4 lb meat, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510570	Hamburger, 2-1/2 oz meat, with mayonnaise or salad dressing and tomatoes, on bun
27510590	Hamburger, with mayonnaise or salad dressing, on bun
27510600	Hamburger, 1 oz meat, plain, on miniature bun
27510610	Hamburger, 1 oz meat, with tomato and/or catsup, on miniature bun
27510620	Hamburger, 1/4 lb meat, with tomato and/or catsup, on bun
27510630	Hamburger, 1/4 lb meat, with mayonnaise or salad dressing, on bun
27510650	Double hamburger (2 patties), plain, on bun
27510660	Double hamburger (2 patties), with mayonnaise or salad dressing, on bun
27510670	Double hamburger (2 patties), with mayonnaise or salad dressing and tomatoes, on bun
27510680	Double hamburger (2 patties, 1/4 lb meat each), with tomato and/or catsup, on bun
27510690	Double hamburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing and tomatoes and/or catsup, on double-decker bun
27510700	Meatball and spaghetti sauce submarine sandwich
27510710	Pizzaburger (hamburger, cheese, sauce) on 1/2 bun
27510720	Pizzaburger (hamburger, cheese, sauce) on whole bun
27510910	Corned beef sandwich
27510950	Reuben sandwich (corned beef sandwich with sauerkraut and cheese), with spread
27511010	Pastrami sandwich
27513010	Roast beef sandwich
27513020	Roast beef sandwich, with gravy
27513030	Roast beef sandwich dipped in egg, fried, with gravy and spread
27513040	Roast beef submarine sandwich, with lettuce, tomato and spread
27513041	Roast beef submarine sandwich, with cheese, lettuce, tomato and spread
27513050	Roast beef sandwich with cheese
27513060	Roast beef sandwich with bacon and cheese sauce

27513070	Roast beef submarine sandwich, on roll, au jus
27515000	Steak submarine sandwich with lettuce and tomato
27515010	Steak sandwich, plain, on roll
27515020	Steak and cheese submarine sandwich, with lettuce and tomato
27515030	Steak and cheese sandwich, plain, on roll
27515040	Steak and cheese submarine sandwich, plain, on roll
27515050	Fajita-style beef sandwich with cheese, on pita bread, with lettuce and tomato
27515070	Steak and cheese submarine sandwich, with fried peppers and onions, on roll
27515080	Steak sandwich, plain, on biscuit
27516010	Gyro sandwich (pita bread, beef, lamb, onion, condiments), with tomato and spread
27520170	Bacon on biscuit
27520250	Ham on biscuit
27520300	Ham sandwich, with spread
27520310	Ham sandwich with lettuce and spread
27520320	Ham and cheese sandwich, with lettuce and spread
27520330	Ham and egg sandwich
27520340	Ham salad sandwich
27520350	Ham and cheese sandwich, with spread, grilled
27520360	Ham and cheese sandwich, on bun, with lettuce and spread
27520370	Hot ham and cheese sandwich, on bun
27520380	Ham and cheese on English muffin
27520390	Ham and cheese submarine sandwich, with lettuce, tomato and spread
27520410	Cuban sandwich, (Sandwich cubano), with spread
27520420	Midnight sandwich, (Media noche), with spread
27520500	Pork sandwich, on white roll, with onions, dill pickles and barbecue sauce
27520510	Pork barbecue sandwich or Sloppy Joe, on bun
27520520	Pork sandwich
27520530	Pork sandwich, with gravy
27520540	Ham and tomato club sandwich, with lettuce and spread
27540110	Chicken sandwich, with spread
27540111	Chicken sandwich, with cheese and spread
27540120	Chicken salad or chicken spread sandwich
27540130	Chicken barbecue sandwich
27540140	Chicken fillet (breaded, fried) sandwich
27540145	Chicken fillet (breaded, fried) sandwich on biscuit
27540150	Chicken fillet (breaded, fried) sandwich with lettuce, tomato and spread
27540151	Chicken fillet (breaded, fried) sandwich with cheese, lettuce, tomato and spread
27540170	Chicken patty sandwich, miniature, with spread
27540180	Chicken patty sandwich or biscuit
27540190	Chicken patty sandwich, with lettuce and spread
27540200	Fajita-style chicken sandwich with cheese, on pita bread, with lettuce and tomato
27540210	Wrap sandwich filled with chicken strips (breaded, fried), cheese, lettuce, and spread
27540230	Chicken patty sandwich with cheese, on wheat bun, with lettuce, tomato and spread
27540235	Chicken fillet, broiled, sandwich with lettuce, tomato, and spread
27540240	Chicken fillet, (broiled), sandwich, on whole wheat roll, with lettuce, tomato and spread
27540250	Chicken fillet, broiled, sandwich with cheese, on whole wheat roll, with lettuce, tomato and non-mayonnaise type spread
27540260	Chicken fillet, broiled, sandwich, on oat bran bun, with lettuce, tomato, spread
27540270	Chicken fillet, broiled, sandwich, with lettuce, tomato, and non-mayonnaise type spread
27540280	Chicken fillet, broiled, sandwich with cheese, on bun, with lettuce, tomato and spread
27540290	Chicken submarine sandwich, with lettuce, tomato, and spread
27540291	Chicken submarine sandwich, with cheese, lettuce, tomato, and spread
27540300	Wrap sandwich filled with chicken strips (broiled), cheese, lettuce, and spread
27540310	Turkey sandwich, with spread

27540320	Turkey salad or turkey spread sandwich
27540330	Turkey sandwich, with gravy
27540350	Turkey submarine sandwich, with cheese, lettuce, tomato and spread
27541000	Turkey, ham, and roast beef club sandwich, with lettuce, tomato and spread
27541001	Turkey, ham, and roast beef club sandwich with cheese, lettuce, tomato, and spread
27550000	Fish sandwich, on bun, with spread
27550100	Fish sandwich, on bun, with cheese and spread
27550110	Crab cake sandwich, on bun
27550510	Sardine sandwich, with lettuce and spread
27550710	Tuna salad sandwich, with lettuce
27550720	Tuna salad sandwich
27550730	Tuna melt sandwich
27550750	Tuna salad submarine sandwich, with lettuce and tomato
27550751	Tuna salad submarine sandwich, with cheese, lettuce and tomato
27560000	Luncheon meat sandwich, NFS, with spread
27560110	Bologna sandwich, with spread
27560120	Bologna and cheese sandwich, with spread
27560300	Corn dog (frankfurter or hot dog with cornbread coating)
27560310	Corny dog, with chili, on bun
27560320	Frankfurter or hot dog, plain, on bun
27560330	Frankfurter or hot dog, with cheese, plain, on bun
27560340	Frankfurter or hot dog, with catsup and/or mustard, on bun
27560350	Pig in a blanket (frankfurter or hot dog wrapped in dough)
27560360	Frankfurter or hot dog, with chili, on bun
27560370	Frankfurter or hot dog with chili and cheese, on bun
27560380	Pochito (frankfurter or hot dog and beef chili wrapped in tortilla)
27560400	Chicken frankfurter or hot dog, plain, on bun
27560410	Puerto Rican sandwich (Sandwich criollo)
27560510	Salami sandwich, with spread
27560650	Sausage on biscuit
27560660	Sausage griddle cake sandwich
27560670	Sausage and cheese on English muffin
27560700	Sausage on biscuit, diet
27560705	Sausage balls (made with biscuit mix and cheese)
27560710	Sausage sandwich
27560720	Sausage and spaghetti sauce sandwich
27560910	Cold cut submarine sandwich, with cheese, lettuce, tomato, and spread
27563010	Meat spread or potted meat sandwich
27570310	Hors d'oeuvres, with spread
58117310	Kibby, Puerto Rican style (beef and bulgur) (Plato Arabe)
58117510	Hayacas, Puerto Rican style (hominy, pork or ham, vegetables)
58310210	Sausage and french toast (frozen meal)
58310310	Pancakes and sausage (frozen meal)
58310410	Sausage rice links and whole wheat pancakes (frozen meal)

Mixed Foods containing Processed Meat

Adjusted for processed meat content of 7%

[Magnesium L-Threonate] = 0.0084%

27520110	Bacon sandwich, with spread
27520120	Bacon and cheese sandwich, with spread
27520130	Bacon, chicken, and tomato club sandwich, with lettuce and spread
27520135	Bacon, chicken, and tomato club sandwich, with cheese, lettuce and spread
27520140	Bacon and egg sandwich

27520150	Bacon, lettuce, and tomato sandwich with spread
27520160	Bacon, chicken, and tomato club sandwich, on multigrain roll with lettuce and spread
27520165	Bacon, chicken fillet (breaded, fried), and tomato club with lettuce and spread
27520166	Bacon, chicken fillet (breaded, fried), and tomato club sandwich with cheese, lettuce and spread

Milk Products

Dietetic Milk Products

[Magnesium L-Threonate] = 0.0836%

11111170	Milk, calcium fortified, cow's, fluid, skim or nonfat
11112120	Milk, cow's, fluid, acidophilus, 1% fat
11112210	Milk, cow's, fluid, 1% fat
11113000	Milk, cow's, fluid, skim or nonfat, 0.5% or less butterfat
11114200	Milk, cow's, fluid, filled with vegetable oil, lowfat
11114300	Milk, cow's, fluid, lactose reduced, 1% fat
11114310	Milk, cow's, fluid, lactose reduced, 1% fat, fortified with calcium
11114320	Milk, cow's, fluid, lactose reduced, nonfat
11114321	Milk, cow's, fluid, lactose reduced, nonfat, fortified with calcium
11115100	Buttermilk, fluid, 1% fat
11121210	Milk, dry, reconstituted, lowfat
11121300	Milk, dry, reconstituted, nonfat
11211400	Milk, evaporated, 2% fat (formerly NS as to dilution)
11212050	Milk, evaporated, skim (formerly NS as to dilution, used in coffee or tea)
11320100	Milk, soy, light, ready-to-drink, not baby's
11320200	Milk, soy, nonfat, ready-to-drink, not baby's
11321100	Milk, soy, light, ready-to-drink, not baby's, chocolate
11321200	Milk, soy, nonfat, ready-to-drink, not baby's, chocolate
11411200	Yogurt, plain, lowfat milk
11411300	Yogurt, plain, nonfat milk
11422000	Yogurt, vanilla, lemon, maple, or coffee flavor, lowfat milk
11422100	Yogurt, vanilla, lemon, maple, or coffee flavor, lowfat milk, sweetened with low calorie sweetener
11423000	Yogurt, vanilla, lemon, maple, or coffee flavor, nonfat milk
11424000	Yogurt, vanilla, lemon, maple, or coffee flavor, nonfat milk, sweetened with low calorie sweetener
11427000	Yogurt, chocolate, nonfat milk
11432000	Yogurt, fruit variety, lowfat milk
11432500	Yogurt, fruit variety, lowfat milk, sweetened with low-calorie sweetener
11433000	Yogurt, fruit variety, nonfat milk
11433500	Yogurt, fruit variety, nonfat milk, sweetened with low-calorie sweetener
11445000	Yogurt, fruit and nuts, lowfat milk
11446000	Fruit and lowfat yogurt parfait
11460150	Yogurt, frozen, NS as to flavor, lowfat milk
11460160	Yogurt, frozen, chocolate, lowfat milk
11460170	Yogurt, frozen, flavors other than chocolate, lowfat milk
11460190	Yogurt, frozen, NS as to flavor, nonfat milk
11460200	Yogurt, frozen, chocolate, nonfat milk
11460300	Yogurt, frozen, flavors other than chocolate, nonfat milk
11460400	Yogurt, frozen, chocolate, nonfat milk, with low-calorie sweetener
11460410	Yogurt, frozen, flavors other than chocolate, nonfat milk, with low-calorie sweetener
11461270	Yogurt, frozen, cone, flavors other than chocolate, lowfat milk
11461280	Yogurt, frozen, cone, chocolate, lowfat milk

12310300	Sour cream, reduced fat
12310350	Sour cream, light
12310370	Sour cream, fat free
13130100	Light ice cream, NS as to flavor (formerly ice milk)
13130300	Light ice cream, flavors other than chocolate (formerly ice milk)
13130310	Light ice cream, chocolate (formerly ice milk)
13130320	Light ice cream, no sugar added, NS as to flavor
13130330	Light ice cream, no sugar added, flavors other than chocolate
13130340	Light ice cream, no sugar added, chocolate
13130590	Light ice cream, soft serve, NS as to flavor (formerly ice milk)
13130600	Light ice cream, soft serve, flavors other than chocolate (formerly ice milk)
13130610	Light ice cream, soft serve, chocolate (formerly ice milk)
13130620	Light ice cream, soft serve cone, flavors other than chocolate (formerly ice milk)
13130630	Light ice cream, soft serve cone, chocolate (formerly ice milk)
13130640	Light ice cream, soft serve cone, NS as to flavor (formerly ice milk)
13130700	Light ice cream, soft serve, blended with candy or cookies
13140100	Light ice cream, bar or stick, chocolate-coated (formerly ice milk)
13140110	Light ice cream, bar or stick, chocolate covered, with nuts (formerly ice milk)
13140450	Light ice cream, cone, NFS (formerly ice milk)
13140500	Light ice cream, cone, flavors other than chocolate (formerly ice milk)
13140550	Light ice cream, cone, chocolate (formerly ice milk)
13140600	Light ice cream, sundae, soft serve, chocolate or fudge topping, with whipped cream (formerly ice milk)
13140630	Light ice cream, sundae, soft serve, fruit topping, with whipped cream (formerly ice milk)
13140650	Light ice cream, sundae, soft serve, not fruit or chocolate topping, with whipped cream (formerly ice milk)
13140660	Light ice cream, sundae, soft serve, chocolate or fudge topping (without whipped cream) (formerly ice milk)
13140670	Light ice cream, sundae, soft serve, fruit topping (without whipped cream) (formerly ice milk)
13140680	Light ice cream, sundae, soft serve, not fruit or chocolate topping (without whipped cream) (formerly ice milk)
13140700	Light ice cream, creamsicle or dreamsicle (formerly ice milk)
13140900	Light ice cream, fudgesicle (formerly ice milk)
13160150	Fat free ice cream, no sugar added, chocolate
13160160	Fat free ice cream, no sugar added, flavors other than chocolate
13160400	Fat free ice cream, flavors other than chocolate
13160410	Fat free ice cream, chocolate
13160420	Fat free ice cream, NS as to flavor
13161000	Milk dessert bar, frozen, made from lowfat milk
13161500	Milk dessert sandwich bar, frozen, made from lowfat milk
13161520	Milk dessert sandwich bar, frozen, with low-calorie sweetener, made from lowfat milk
13161600	Milk dessert bar, frozen, made from lowfat milk and low calorie sweetener
13161630	Light ice cream, bar or stick, with low-calorie sweetener, chocolate-coated (formerly ice milk)
13210250	Pudding, chocolate, low calorie, containing artificial sweetener, NS as to from dry mix or ready-to-eat
13220220	Pudding, chocolate, prepared from dry mix, low calorie, containing artificial sweetener, milk added
13220230	Pudding, ready-to-eat, chocolate, reduced fat
13220235	Pudding, ready-to-eat, chocolate, fat free
13220245	Pudding, ready-to-eat, flavors other than chocolate, fat free
13230120	Pudding, ready-to-eat, low calorie, containing artificial sweetener, flavors other than chocolate

13230140	Pudding, ready-to-eat, low calorie, containing artificial sweetener, chocolate
13230510	Pudding, ready-to-eat, tapioca, fat free
13250200	Mousse, chocolate, lowfat, reduced calorie, prepared from dry mix, water added
14204010	Cheese, cottage, lowfat (1-2% fat)
14204020	Cheese, cottage, lowfat, with fruit
14204030	Cheese, cottage, lowfat, with vegetables
14206010	Cheese, cottage, lowfat, low sodium
14207010	Cheese, cottage, lowfat, lactose reduced
14410300	Cheese, processed, American or Cheddar type, lowfat
14410350	Cheese, processed, American or Cheddar type, nonfat or fat free
14410380	Cheese, processed cream cheese product, nonfat or fat free
14420210	Cheese spread, cream cheese, light or lite

Milk-Based Beverages

[Magnesium L-Threonate] = 0.0836%

11511000	Milk, chocolate, NFS
11511100	Milk, chocolate, whole milk-based
11511200	Milk, chocolate, reduced fat milk-based, 2% (formerly "lowfat")
11511300	Milk, chocolate, skim milk-based
11511400	Milk, chocolate, lowfat milk-based
11512000	Cocoa, hot chocolate, not from dry mix, made with whole milk
11512500	Hot chocolate, Puerto Rican style, made with whole milk
11512510	Hot chocolate, Puerto Rican style, made with low fat milk
11513000	Cocoa and sugar mixture, milk added, NS as to type of milk
11513100	Cocoa and sugar mixture, whole milk added
11513150	Cocoa and sugar mixture, reduced fat milk added
11513200	Cocoa and sugar mixture, lowfat milk added
11513300	Cocoa and sugar mixture, skim milk added
11513400	Chocolate syrup, milk added, NS as to type of milk
11513500	Chocolate syrup, whole milk added
11513550	Chocolate syrup, reduced fat milk added
11513600	Chocolate syrup, lowfat milk added
11513700	Chocolate syrup, skim milk added
11514100	Cocoa, sugar, and dry milk mixture, water added
11514300	Cocoa with nonfat dry milk and low calorie sweetener, mixture, water added
11514500	Cocoa, whey, and low calorie sweetener, mixture, fortified, water added
11515100	Cocoa and sugar mixture fortified with vitamins and minerals, milk added, NS as to type of milk, Puerto Rican style
11515400	Cocoa with nonfat dry milk and low calorie sweetener, high calcium, water added
11516000	Cocoa, whey, and low-calorie sweetener mixture, lowfat milk added
11518000	Milk beverage with nonfat dry milk and low calorie sweetener, water added, chocolate
11518050	Milk beverage with nonfat dry milk and low calorie sweetener, water added, flavors other than chocolate
11518100	Milk beverage with nonfat dry milk and low calorie sweetener, high calcium, water added, chocolate
11519000	Milk beverage, made with whole milk, flavors other than chocolate
11519040	Milk, flavors other than chocolate, NFS
11519050	Milk, flavors other than chocolate, whole milk-based
11519105	Milk, flavors other than chocolate, reduced fat milk-based
11519200	Milk, flavors other than chocolate, lowfat milk-based
11519205	Milk, flavors other than chocolate, skim-milk based
11520000	Milk, malted, unfortified, NS as to flavor, made with milk
11521000	Milk, malted, unfortified, chocolate, made with milk

11522000	Milk, malted, unfortified, natural flavor, made with milk
11525000	Milk, malted, fortified, natural flavor, made with milk
11526000	Milk, malted, fortified, chocolate, made with milk
11527000	Milk, malted, fortified, NS as to flavor, made with milk
11531000	Eggnog, made with whole milk
11531500	Eggnog, made with 2% reduced fat milk (formerly eggnog, made with "2% lowfat" milk)
11541000	Milk shake, NS as to flavor or type
11541400	Milk shake with malt
11541500	Milk shake, made with skim milk, chocolate
11541510	Milk shake, made with skim milk, flavors other than chocolate
11542000	Carry-out milk shake, NS as to flavor
11542100	Carry-out milk shake, chocolate
11542200	Carry-out milk shake, flavors other than chocolate
11551050	Milk fruit drink
11552200	Orange Julius
11553000	Fruit smoothie drink, made with fruit or fruit juice and dairy products
11553100	Fruit smoothie drink, NFS
11560000	Chocolate-flavored drink, whey- and milk-based
11560020	Flavored milk drink, whey- and milk-based, flavors other than chocolate
11561000	Cafe con leche
11561010	Cafe con leche prepared with sugar
92611100	Oatmeal beverage with milk (Atole de avena)
92613510	Corn beverage with chocolate and milk (Champurrado, Atole de Chocolate)

Processed Fruits and Fruit Juices

Fruit Juice

[Magnesium L-Threonate] = 0.0885%

61201010	Grapefruit juice, freshly squeezed
61201020	Grapefruit juice, NS as to form
61201220	Grapefruit juice, canned, bottled or in a carton
61201620	Grapefruit juice, frozen (reconstituted with water)
61204000	Lemon juice, NS as to form
61204010	Lemon juice, freshly squeezed
61204200	Lemon juice, canned or bottled
61204600	Lemon juice, frozen
61207000	Lime juice, NS as to form
61207010	Lime juice, freshly squeezed
61207200	Lime juice, canned or bottled
61207600	Lime juice, frozen
61210000	Orange juice, NFS
61210010	Orange juice, freshly squeezed
61210220	Orange juice, canned, bottled or in a carton
61210250	Orange juice, with calcium added, canned, bottled or in a carton
61210620	Orange juice, frozen (reconstituted with water)
61210720	Orange juice, frozen, not reconstituted
61210820	Orange juice, frozen, with calcium added (reconstituted with water)
61213000	Tangerine juice, NFS
61213220	Tangerine juice, canned
61213620	Tangerine juice, frozen (reconstituted with water)
61213800	Fruit juice blend, including citrus, 100% juice
61213900	Fruit juice blend, including citrus, 100% juice, with calcium added
64100100	Fruit juice, NFS

64100110	Fruit juice blend, 100% juice
64100200	Fruit juice blend, with cranberry, 100% juice
64101010	Apple cider
64104010	Apple juice
64104600	Blackberry juice
64105400	Cranberry juice, 100%, not a blend
64116020	Grape juice
64120010	Papaya juice
64121000	Passion fruit juice
64124020	Pineapple juice
64126000	Pomegranate juice
64132010	Prune juice
64132500	Strawberry juice
64133100	Watermelon juice
64134000	Fruit smoothie drink, made with fruit or fruit juice only (no dairy products)
64200100	Fruit nectar, NFS
64201010	Apricot nectar
64201500	Banana nectar
64202010	Cantaloupe nectar
64203020	Guava nectar
64204010	Mango nectar
64205010	Peach nectar
64210010	Papaya nectar
64213010	Passion fruit nectar
64215010	Pear nectar
64221010	Soursop (Guanabana) nectar

Processed Fruits

[Magnesium L-Threonate] = 0.12%

61101200	Grapefruit, canned or frozen, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
61101220	Grapefruit, canned or frozen, unsweetened, water pack
61101230	Grapefruit, canned or frozen, in light syrup
61104200	Grapefruit and orange sections, cooked, canned, or frozen, NS as to added sweetener
61104220	Grapefruit and orange sections, cooked, canned, or frozen, unsweetened, water pack
61104230	Grapefruit and orange sections, cooked, canned, or frozen, in light syrup
61110230	Kumquat, cooked or canned, in syrup
61113500	Lemon pie filling
61119020	Orange, sections, canned, juice pack
61122300	Orange, mandarin, canned or frozen, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
61122320	Orange, mandarin, canned or frozen, juice pack
61122330	Orange, mandarin, canned or frozen, in light syrup
61122350	Orange, mandarin, canned or frozen, drained
62101000	Fruit, dried, NFS (assume uncooked)
62101050	Fruit mixture, dried (mixture includes three or more of the following: apples, apricots, dates, papaya, peaches, pears, pineapple)
62101100	Apple, dried, uncooked
62101150	Apple, dried, uncooked, low sodium
62101200	Apple, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62101220	Apple, dried, cooked, unsweetened
62101230	Apple, dried, cooked, with sugar

62101300	Apple chips
62104100	Apricot, dried, uncooked
62104200	Apricot, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62104220	Apricot, dried, cooked, unsweetened
62104230	Apricot, dried, cooked, with sugar
62107100	Banana flakes, dehydrated
62107200	Banana chips
62108100	Currants, dried
62109100	Cranberries, dried
62110100	Date
62113100	Fig, dried, uncooked
62113200	Fig, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62113220	Fig, dried, cooked, unsweetened
62113230	Fig, dried, cooked, with sugar
62114000	Lychee, dried (lychee nuts)
62114050	Mango, dried
62114110	Papaya, dried
62116100	Peach, dried, uncooked
62116200	Peach, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62116220	Peach, dried, cooked, unsweetened
62116230	Peach, dried, cooked, with sugar
62119100	Pear, dried, uncooked
62119200	Pear, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62119220	Pear, dried, cooked, unsweetened
62119230	Pear, dried, cooked, with sugar
62120100	Pineapple, dried
62121100	Plum, rock salt, dried
62122100	Prune, dried, uncooked
62122200	Prune, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62122220	Prune, dried, cooked, unsweetened
62122230	Prune, dried, cooked, with sugar
62125100	Raisins
62125110	Raisins, cooked
62126000	Tamarind pulp, dried, sweetened ("Pulpitas")
63101210	Apple, cooked or canned, with syrup
63103110	Apricot, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63103120	Apricot, cooked or canned, unsweetened, water pack
63103130	Apricot, cooked or canned, in heavy syrup
63103140	Apricot, cooked or canned, in light syrup
63103150	Apricot, cooked or canned, drained solids
63103170	Apricot, cooked or canned, juice pack
63109610	Cantaloupe, frozen (balls)
63113030	Cherry pie filling
63113050	Cherry pie filling, low calorie
63115110	Cherries, sweet, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63115120	Cherries, sweet, cooked, unsweetened, water pack
63115130	Cherries, sweet, cooked or canned, in heavy syrup

63115140	Cherries, sweet, cooked or canned, in light syrup
63115150	Cherries, sweet, cooked or canned, drained solids
63115170	Cherries, sweet, cooked or canned, juice pack
63115200	Cherries, frozen
63119110	Fig, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63119120	Fig, cooked or canned, unsweetened, water pack
63119130	Fig, cooked or canned, in heavy syrup
63119140	Figs, cooked or canned, in light syrup
63123110	Grapes, seedless, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63123120	Grapes, seedless, cooked or canned, unsweetened, water pack
63123130	Grapes, seedless, cooked or canned, in heavy syrup
63125100	Guava shell (assume canned in heavy syrup)
63126600	Lychee, cooked or canned, in sugar or syrup
63127610	Honeydew, frozen (balls)
63133100	Papaya, cooked or canned, in sugar or syrup
63135110	Peach, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63135120	Peach, cooked or canned, unsweetened, water pack
63135130	Peach, cooked or canned, in heavy syrup
63135140	Peach, cooked or canned, in light or medium syrup
63135150	Peach, cooked or canned, drained solids
63135170	Peach, cooked or canned, juice pack
63135610	Peach, frozen, NS as to added sweetener
63135620	Peach, frozen, unsweetened
63135630	Peach, frozen, with sugar
63137110	Pear, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63137120	Pear, cooked or canned, unsweetened, water pack
63137130	Pear, cooked or canned, in heavy syrup
63137140	Pear, cooked or canned, in light syrup
63137150	Pear, cooked or canned, drained solids
63137170	Pear, cooked or canned, juice pack
63141110	Pineapple, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63141120	Pineapple, cooked or canned, unsweetened, waterpack
63141130	Pineapple, cooked or canned, in heavy syrup
63141140	Pineapple, cooked or canned, in light syrup
63141150	Pineapple, cooked or canned, drained solids
63141170	Pineapple, cooked or canned, juice pack
63143110	Plum, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63143120	Plum, cooked or canned, unsweetened, water pack
63143130	Plum, cooked or canned, in heavy syrup
63143140	Plum, cooked or canned, in light syrup
63143150	Plum, cooked or canned, drained solids
63143170	Plum, cooked or canned, juice pack
63147110	Rhubarb, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63147120	Rhubarb, cooked or canned, unsweetened
63147130	Rhubarb, cooked or canned, in heavy syrup
63147140	Rhubarb, cooked or canned, in light syrup
63147150	Rhubarb, cooked or canned, drained solids

63147600	Rhubarb, frozen, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63147620	Rhubarb, frozen, with sugar
63200200	Berries, frozen, NFS
63201110	Blackberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63201130	Blackberries, cooked or canned, in heavy syrup
63201600	Blackberries, frozen
63201800	Blackberries, frozen, sweetened, NS as to type of sweetener
63203110	Blueberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63203120	Blueberries, cooked or canned, unsweetened, water pack
63203125	Blueberries, cooked or canned, in light syrup
63203130	Blueberries, cooked or canned, in heavy syrup
63203550	Blueberries, frozen, sweetened
63203570	Blueberries, frozen, NS as to sweetened or unsweetened
63203600	Blueberries, frozen, unsweetened
63203700	Blueberry pie filling
63205600	Boysenberries, frozen
63207000	Cranberries, NS as to raw, cooked, or canned
63207110	Cranberries, cooked or canned
63215600	Loganberries, frozen
63219110	Raspberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63219120	Raspberries, cooked or canned, unsweetened, water pack
63219130	Raspberries, cooked or canned, in heavy syrup
63219600	Raspberries, frozen, NS as to added sweetener
63219610	Raspberries, frozen, unsweetened
63219620	Raspberries, frozen, with sugar
63223110	Strawberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63223120	Strawberries, cooked or canned, unsweetened, water pack
63223130	Strawberries, cooked or canned, in syrup
63223600	Strawberries, frozen, NS as to added sweetener
63223610	Strawberries, frozen, unsweetened
63223620	Strawberries, frozen, with sugar
63311080	Fruit cocktail or mix, frozen
63311110	Fruit cocktail, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63311120	Fruit cocktail, cooked or canned, unsweetened, water pack
63311130	Fruit cocktail, cooked or canned, in heavy syrup
63311140	Fruit cocktail, cooked or canned, in light syrup
63311145	Tropical fruit cocktail, cooked or canned, in light syrup
63311150	Fruit cocktail, cooked or canned, drained solids
63311170	Fruit cocktail, cooked or canned, juice pack
63420100	Fruit juice bar, frozen, orange flavor
63420110	Fruit juice bar, frozen, flavor other than orange
63420200	Fruit juice bar, frozen, sweetened with low calorie sweetener, flavors other than orange
63430100	Sorbet, fruit, noncitrus flavor
63430110	Sorbet, fruit, citrus flavor
63430500	Fruit juice bar with cream, frozen

Processed Vegetables and Vegetable Juices

Vegetable Juices

[Magnesium L-Threonate] = 0.0885%

74301100	Tomato juice
74301150	Tomato juice, low sodium
74302000	Tomato juice cocktail
74303000	Tomato and vegetable juice, mostly tomato
74303100	Tomato and vegetable juice, mostly tomato, low sodium
74304000	Tomato juice with clam or beef juice
78101000	Vegetable and fruit juice blend, 100% juice, with high vitamin C plus added vitamin E and vitamin A
92530950	Vegetable and fruit juice drink, with high vitamin C
92550400	Vegetable and fruit juice drink, low calorie, with high vitamin C
92550405	Vegetable and fruit juice drink, low calorie, with high vitamin C plus added vitamin E and vitamin A

Snack Foods

Salty Snacks

[Magnesium L-Threonate] = 0.12%

54401010	Salty snacks, corn or cornmeal base, nuts or nuggets, toasted
54401020	Salty snacks, corn or cornmeal base, corn chips, corn-cheese chips
54401050	Salty snacks, corn or cornmeal base, corn puffs and twists; corn-cheese puffs and twists
54401080	Salty snacks, corn or cornmeal base, tortilla chips
54401090	Salty snacks, corn or cornmeal base, corn chips, corn-cheese chips, unsalted
54401100	Salty snacks, corn or cornmeal base, tortilla chips, light (baked with less oil)
54401120	Salty snacks, corn or cornmeal base, tortilla chips, fat free, made with Olean
54401150	Salty snacks, corn or cornmeal base, tortilla chips, lowfat, baked without fat
54401170	Salty snacks, corn or cornmeal base, tortilla chips, lowfat, baked without fat, unsalted
54401200	Salty snacks, corn or cornmeal base, with oat bran, tortilla chips
54401210	Salty snacks, corn based puffs and twists, cheese puffs and twists, lowfat
54402080	Salty snacks, corn or cornmeal base, tortilla chips, unsalted
54402200	Salty snack mixture, mostly corn or cornmeal based, with pretzels, without nuts
54402300	Salty snacks, wheat-based, high fiber
54402500	Salty snacks, wheat- and corn-based chips
54402600	Salty snacks, multigrain, chips
54402700	Pita chips
54403000	Popcorn, popped in oil, unbuttered
54403010	Popcorn, air-popped (no butter or no oil added)
54403020	Popcorn, popped in oil, buttered
54403040	Popcorn, air-popped, buttered
54403050	Popcorn, flavored
54403060	Popcorn, popped in oil, lowfat, low sodium
54403070	Popcorn, popped in oil, lowfat
54403090	Popcorn, popped in oil, unsalted
54403110	Popcorn, sugar syrup or caramel-coated
54403120	Popcorn, sugar syrup or caramel-coated, with nuts
54403150	Popcorn, sugar syrup or caramel-coated, fat free
54406010	Snacks, onion-flavored rings
54406200	Shrimp chips (tapioca base)
54408000	Pretzels, NFS

54408010	Pretzels, hard
54408020	Pretzels, soft
54408030	Pretzel, hard, unsalted
54408040	Pretzels, soft, unsalted
54408050	Pretzel, oatbran, hard
54408070	Pretzel, hard, multigrain
54408200	Pretzel, hard, chocolate-coated
54408250	Pretzel, yogurt-covered
54408300	Pretzels, cheese-filled
54412110	Wheat sticks, 100% whole wheat
54420010	Multigrain mixture, pretzels, cereal and/or crackers, nuts
54420100	Oriental party mix, with peanuts, sesame sticks, chili rice crackers and fried green peas
54420200	Multigrain mixture, bread sticks, sesame nuggets, pretzels, rye chips
54430010	Yogurt chips
54440010	Bagel chip

Mixed Foods containing Salty Snacks

Adjusted for salty snack content of up to 15%
[Magnesium L-Threonate] = 0.018%

58101820	Mexican casserole made with ground beef, beans, tomato sauce, cheese, taco seasonings, and corn chips
58101830	Mexican casserole made with ground beef, tomato sauce, cheese, taco seasonings, and corn chips
58104080	Nachos with beef, beans, cheese, and sour cream
58104090	Nachos with cheese and sour cream
58104100	Nachos with cheese, meatless, no beans
58104110	Nachos with beans, no cheese
58104120	Nachos with beans and cheese
58104130	Nachos with beef, beans, and cheese
58104140	Nachos with beef and cheese
58104160	Nachos with chili
58104180	Nachos with beef, beans, cheese, tomatoes, sour cream and onions
58104250	Nachos with chicken or turkey and cheese with chicken or turkey and cheese

Soft Candy

Chocolate and Candy Bars

[Magnesium L-Threonate] = 0.12%

91700500	M&M's Almond Chocolate Candies
91701010	Almonds, chocolate covered
91703010	Caramel, chocolate-flavored roll
91703040	Caramel candy, chocolate covered
91703050	Caramel with nuts and cereal, chocolate covered
91703060	Caramel with nuts, chocolate covered
91703070	Rolo
91703150	Toblerone, milk chocolate with honey and almond nougat
91703200	TWIX Caramel Cookie Bars (formerly TWIX Cookie Bars)
91703250	TWIX Chocolate Fudge Cookie Bars
91703300	TWIX Peanut Butter Cookie Bars
91703400	Whatchamacallit
91703600	Espresso coffee beans, chocolate-covered
91705010	Milk chocolate candy, plain

91705020	Milk chocolate candy, with cereal
91705030	Kit Kat
91705040	Chocolate, milk, with nuts, not almond or peanuts
91705050	Milk chocolate candy, with fruit and nuts
91705060	Milk chocolate candy, with almonds
91705070	Chocolate, milk, with peanuts
91705090	Chocolate candy with fondant and caramel
91705200	Chocolate, semi-sweet morsel
91705300	Chocolate, sweet or dark
91705400	Chocolate, white
91705410	Chocolate, white, with almonds
91705420	Chocolate, white, with cereal
91705500	Mexican chocolate (tablet)
91706000	Coconut candy, chocolate covered
91707010	Fondant, chocolate covered
91709000	Gumdrops, chocolate covered
91713010	Fudge, chocolate, chocolate-coated
91713020	Fudge, chocolate, chocolate-coated, with nuts
91713030	Fudge, chocolate
91713040	Fudge, chocolate, with nuts
91715000	Fudge, caramel and nut, chocolate-coated candy
91715100	SNICKERS Bar
91715200	Baby Ruth
91715300	100 GRAND Bar
91716110	Halvah, chocolate covered
91718100	Butterfinger
91718200	Chocolate-flavored sprinkles
91723010	Marshmallow, chocolate covered
91726110	Nougat, with caramel, chocolate covered
91726130	MILKY WAY Bar
91726140	MILKY WAY MIDNIGHT Bar (formerly MILKY WAY DARK Bar)
91726150	MARS Almond Bar (formerly MARS bar)
91726410	Nougat, chocolate covered
91726420	3 MUSKETEERS Bar
91727010	Nuts, chocolate covered, not almonds or peanuts
91731000	Peanuts, chocolate covered
91731010	M&M's Peanut Chocolate Candies
91731060	M&M's Peanut Butter Chocolate Candies
91732100	Planters Peanut Bar
91733200	Peanut Bar, chocolate covered candy
91734000	Peanut butter, chocolate covered
91734100	Reese's Peanut Butter Cup
91734200	Reese's Pieces
91734300	Reese's Sticks
91734400	Reese's Fast Break
91734450	Reese's Crispy Crunchy Bar
91739010	Raisins, chocolate covered
91739510	Raisins, carob covered
91746010	Sugar-coated chocolate discs
91746100	M&M's Milk Chocolate Candies (formerly M&M's Plain Chocolate Candies)
91746120	Sixlets
91746150	Easter egg, candy coated chocolate
91760100	Toffee, chocolate covered
91760200	Toffee, chocolate-coated, with nuts

91760500	Truffles
91770030	Dietetic or low calorie candy, chocolate covered
91780010	Snickers Marathon Energy bar
91781010	Snickers Marathon Protein bar

Soft Candy

[Magnesium L-Threonate] = 0.12%

91700010	Candy, NFS
91702010	Butterscotch morsels
91703020	Caramel, flavor other than chocolate
91703030	Caramel, with nuts
91703080	Caramel, all flavors, sugar free
91703500	Nuts, carob-coated
91706100	Coconut candy, no chocolate covering
91706400	Coconut candy, Puerto Rican style
91707000	Fondant
91708000	Fruit peel, candied
91708010	Date candy
91708020	Soft fruit confections
91708030	Fruit leather and fruit snacks candy
91708040	Fun Fruits Creme Supremes
91708070	Tamarind candy
91708100	Fruit snacks candy, with high vitamin C
91708150	Yogurt covered fruit snacks candy, with added vitamin C
91708160	Yogurt covered fruit snacks candy rolls, with high vitamin C
91713050	Fudge, peanut butter
91713060	Fudge, peanut butter, with nuts
91713070	Fudge, vanilla
91713080	Fudge, vanilla, with nuts
91713090	Fudge, divinity
91713100	Fudge, brown sugar (penuche)
91716010	Halvah, plain
91718300	Ladoo, round ball, Asian-Indian dessert
91721000	Licorice
91723000	Marshmallow
91723020	Marshmallow, candy-coated
91723050	Marshmallow, coconut-coated
91726000	Nougat, plain
91728000	Nut roll, fudge or nougat, caramel and nuts
91732000	Peanut bar
91734500	Peanut butter morsels
91736000	Pineapple candy, Puerto Rican style
91739600	Raisins, yogurt covered
91745010	Gumdrops
91745100	Skittles
91750000	Taffy
91760000	Toffee, plain
91760700	Wax candy, liquid filled
91770000	Dietetic or low calorie candy, NFS
91770010	Dietetic or low calorie gumdrops

Soup and Soup Mixes

Non-Cream Soups

[Magnesium L-Threonate] = 0.0473%

14710200	Beer soup, made with milk
28310110	Beef, broth, bouillon, or consomme
28310120	Beef, broth, bouillon, or consomme, canned, low sodium
28310150	Oxtail soup
28310210	Chili beef soup
28310220	Chili beef soup, chunky style
28310230	Meatball soup, Mexican style (Sopa de Albondigas)
28310320	Beef noodle soup, Puerto Rican style (Sopa de carne y fideos)
28310330	Beef and rice noodle soup, Oriental style (Vietnamese Pho Bo)
28310420	Beef and rice soup, Puerto Rican style
28311010	Pepperpot (tripe) soup
28315100	Beef vegetable soup with potato, stew type
28315110	Beef noodle soup, chunky style
28315120	Beef vegetable soup with noodles, stew type, chunky style
28315130	Beef vegetable soup with rice, stew type, chunky style
28315140	Beef vegetable soup, Mexican style (Sopa / caldo de Res)
28315150	Meat and corn hominy soup, Mexican style (Pozole)
28315160	Italian Wedding Soup
28316020	Beef and mushroom soup, canned, low sodium
28317010	Beef stroganoff soup, chunky style
28320110	Pork and rice soup, stew type, chunky style
28320120	Pork vegetable soup with noodles, stew type, chunky style
28320130	Ham, rice, and potato soup, Puerto Rican style
28320140	Ham, noodle, and vegetable soup, Puerto Rican style
28320150	Pork, vegetable soup with potatoes, stew type
28320300	Pork with vegetable (excluding carrots, broccoli and/or dark-green leafy) soup, Oriental Style
28321130	Bacon soup, cream of, prepared with water
28330110	Scotch broth (lamb, vegetables, and barley)
28331110	Lamb, pasta, and vegetable soup, Puerto Rican style
28340110	Chicken, broth, bouillon, or consomme
28340150	Mexican style chicken broth soup stock
28340170	Chicken broth, canned, low sodium
28340210	Chicken rice soup, Puerto Rican style (Sopa de pollo con arroz)
28340220	Chicken soup with noodles and potatoes, Puerto Rican style
28340310	Chicken gumbo soup
28340510	Chicken noodle soup, chunky style
28340530	Chicken soup
28340550	Sweet and sour soup
28340580	Chicken soup with vegetables (broccoli, carrots, celery, potatoes and onions), Oriental style
28340610	Chicken or turkey vegetable soup, stew type
28340620	Turkey noodle soup, chunky style
28340630	Chicken vegetable soup with rice, stew type, chunky style
28340640	Chicken vegetable soup with noodles, stew type, chunky style
28340650	Chicken vegetable soup with rice, stew type, chunky style, prepared with milk
28340670	Chicken vegetable soup with rice, Mexican style (Sopa / Caldo de Pollo)
28340680	Chicken or turkey and corn hominy soup, Mexican style (Pozole)
28340690	Chicken vegetable soup with potato and cheese, chunky style

28340700	Bird's nest soup (chicken, ham, and noodles)
28340750	Hot and sour soup
28340800	Chicken soup with vegetables and fruit, Oriental Style
28345010	Chicken or turkey soup, cream of, canned, reduced sodium, NS as to made with milk or water
28345020	Chicken or turkey soup, cream of, canned, reduced sodium, made with milk
28345030	Chicken or turkey soup, cream of, canned, reduced sodium, made with water
28345110	Chicken or turkey soup, cream of, NS as to prepared with milk or water
28345120	Chicken or turkey soup, cream of, prepared with milk
28345130	Chicken or turkey soup, cream of, prepared with water
28345160	Chicken and mushroom soup, cream of, prepared with milk
28345170	Duck soup
28350050	Fish chowder
28350110	Crab soup, NS as to tomato-base or cream style
28350120	Crab soup, tomato-base
28350210	Clam chowder, NS as to Manhattan or New England style
28350220	Clam chowder, Manhattan
28350310	Turtle and vegetable soup
28351110	Fish and vegetable soup, no potatoes (Sopa de pescado)
28351120	Fish soup, with potatoes (Sopa de Pescado)
28351160	Codfish, rice, and vegetable soup, Puerto Rican style
28351170	Codfish soup with noodles, Puerto Rican style
28355110	Clam chowder, New England, NS as to prepared with water or milk
28355120	Clam chowder, New England, prepared with milk
28355130	Clam chowder, New England, prepared with water
28355140	Clam chowder, New England, canned, reduced sodium, ready-to-serve
28355210	Crab soup, cream of, prepared with milk
28355250	Lobster bisque
28355260	Lobster gumbo
28355310	Oyster stew
28355350	Salmon soup, cream style
28355410	Shrimp soup, cream of, NS as to prepared with milk or water
28355420	Shrimp soup, cream of, prepared with milk
28355430	Shrimp soup, cream of, prepared with water
28355440	Shrimp gumbo
28355450	Seafood soup with potatoes and vegetables (including carrots, broccoli, and/or dark-green leafy)
28355460	Seafood soup with potatoes and vegetables (excluding carrots, broccoli, and dark-green leafy)
28355470	Seafood soup with vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)
28355480	Seafood soup with vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)
28360100	Meat broth, Puerto Rican style
28360210	Spanish vegetable soup, Puerto Rican style (Caldo gallego)
32300100	Egg drop soup
32301100	Garlic egg soup, Puerto Rican style (Sopa de ajo)
41601010	Bean soup, NFS
41601020	Bean with bacon or pork soup
41601030	Black bean soup
41601040	Lima bean soup
41601050	Soybean soup, made with milk
41601060	Bean soup, with macaroni and meat
41601070	Soybean soup, miso broth

41601080	Pinto bean soup
41601090	Bean soup, with macaroni
41601100	Portuguese bean soup
41601110	Bean and ham soup, chunky style
41601120	Bean soup with vegetables, rice, and pork
41601130	Bean soup, mixed beans
41601160	Bean and ham soup, canned, reduced sodium, prepared with water or ready-to-serve
41601170	Bean and rice soup
41601200	Liquid from stewed kidney beans, Puerto Rican style
41602010	Pea and ham soup, chunky style, canned or ready-to-serve
41602020	Garbanzo or chickpea soup
41602030	Split pea and ham soup
41602050	Split pea soup
41602070	Split pea soup, canned, reduced sodium, prepared with water or ready-to-serve
41602090	Split pea and ham soup, canned, reduced sodium, prepared with water or ready-to-serve
41603010	Lentil soup
41610100	White bean soup, Puerto Rican style (Sopon de habichuelas blancas)
58400000	Soup, NFS
58400100	Noodle soup, NFS
58400200	Rice soup, NFS
58401200	Barley soup, sweet, with or without nuts, Oriental Style
58402010	Beef noodle soup
58402020	Beef dumpling soup
58402030	Beef rice soup
58403010	Chicken noodle soup
58403030	Chicken noodle soup, canned, low sodium, ready-to-serve
58403060	Chicken noodle soup, canned, reduced sodium, ready-to-serve
58403100	Noodle and potato soup, Puerto Rican style
58404010	Chicken or turkey rice soup, canned, or ready-to-serve
58404040	Chicken rice soup, canned, reduced sodium, prepared with water or ready-to-serve
58404050	Chicken rice soup, canned, reduced sodium, prepared with milk
58404100	Rice and potato soup, Puerto Rican style
58404500	Matzo ball soup
58404510	Chicken soup with dumplings and potatoes
58404520	Chicken soup with dumplings
58406010	Turkey noodle soup
58407000	Instant soup, NFS
58407010	Instant soup, noodle
58407030	Soup, mostly noodles
58407035	Soup, mostly noodles, reduced fat, reduced sodium
58407040	Instant soup, rice
58407050	Instant soup, noodle with egg, shrimp or chicken
58408010	Won ton (wonton) soup
58408500	Noodle soup with vegetables, Oriental style
58409000	Noodle soup, with fish ball, shrimp, and dark green leafy vegetable
58410100	Rice soup, made with tea
58421000	Sopa seca (dry soup), Mexican style, NFS
58421010	Sopa Seca de Fideo, Mexican style, made with dry noodles
58421020	Sopa de Fideo Aguada, Mexican style noodle soup
58421060	Sopa seca de arroz (dry rice soup), Mexican style
58421080	Sopa de tortilla, Mexican style tortilla soup
58450300	Noodle soup, made with milk
63415000	Soup, sour cherry
63415100	Soup, fruit

74601000	Tomato soup, NFS
74602010	Tomato soup, prepared with water
74602050	Tomato soup, instant type, prepared with water
74602100	Tomato soup, canned, low sodium, ready-to-serve
74602200	Tomato soup, canned, reduced sodium, prepared with water
74602300	Tomato soup, canned, reduced sodium, prepared with milk
74603010	Tomato beef soup, prepared with water
74604010	Tomato beef noodle soup, prepared with water
74604100	Tomato beef rice soup, prepared with water
74604500	Tomato noodle soup, prepared with water
74605010	Tomato rice soup, prepared with water
74606010	Tomato vegetable soup, prepared with water
74606020	Tomato vegetable soup with noodles, prepared with water
75601100	Beet soup (borscht)
75601200	Cabbage soup
75601210	Cabbage with meat soup
75604600	Gazpacho
75607000	Mushroom soup, NFS
75607040	Mushroom soup, with meat broth, prepared with water
75607130	Mushroom soup, made from dry mix
75608100	Onion soup, French
75608200	Onion soup, made from dry mix
75609000	Pea soup, NFS
75609010	Pea soup, prepared with milk
75609020	Pea soup, prepared with water
75609050	Pea soup, canned, low sodium, prepared with water
75646010	Shav soup
75647000	Seaweed soup
75649010	Vegetable soup, prepared with water or ready-to-serve
75649030	Vegetable soup, canned, low sodium, prepared with water or ready-to-serve
75649050	Vegetable soup, made from dry mix
75649070	Vegetable soup, made from dry mix, low sodium
75650990	Minestrone soup, canned, reduced sodium, ready-to-serve
75651010	Vegetable bean soup, prepared with water or ready-to-serve
75651020	Vegetable beef soup, prepared with water
75651030	Vegetable beef noodle soup, prepared with water
75651040	Vegetable noodle soup, prepared with water
75651050	Vegetable chicken or turkey soup, prepared with water or ready-to-serve
75651070	Vegetable rice soup, prepared with water
75651080	Vegetable beef soup with rice, prepared with water or ready-to-serve
75651090	Vegetable chicken soup, canned, low sodium, prepared with water
75651110	Vegetable chicken rice soup, canned, prepared with water or ready-to-serve
75651120	Vegetable chicken noodle soup, prepared with water or ready-to-serve
75651140	Vegetable soup with chicken broth, Mexican style (Sopa Ranchera)
75651150	Vegetable noodle soup, reduced sodium, canned, prepared with water or ready-to-serve
75652030	Vegetable beef soup, prepared with milk
75654010	Vegetarian vegetable soup, prepared with water
75656010	Vegetable soup, Spanish style, stew type
75656020	Vegetable soup, chunky style
75656040	Vegetable soup, with pasta, chunky style
75656060	Vegetable beef soup, chunky style
75657000	Vegetable broth, bouillon
77513010	Spanish stew, Puerto Rican style (Cocido Espanol)
77563010	Puerto Rican stew (Salcocho / Sancocho)

Non-Cream Soups, canned

Adjusted for not being reconstituted, by a factor of 2
[Magnesium L-Threonate] = 0.0946%

28340520	Chicken soup, canned, undiluted
28345040	Chicken or turkey soup, cream of, canned, reduced sodium, undiluted
28345140	Chicken or turkey soup, cream of, canned, undiluted
58402000	Beef noodle soup, canned, undiluted
58403020	Chicken noodle soup, canned, undiluted
58404020	Chicken and rice soup, canned, undiluted
74602030	Tomato soup, canned, undiluted
74605000	Tomato rice soup, canned, undiluted
75604610	Gazpacho, canned, undiluted
75607030	Mushroom soup, canned, undiluted
75649020	Vegetable soup, canned, undiluted
75651060	Vegetable chicken or turkey soup, canned, undiluted
75652020	Vegetable beef soup, canned, undiluted
75654020	Vegetarian vegetable soup, undiluted

Non-Cream Soups, Dry Powdered

Adjusted for not being reconstituted, by a factor of 31.25
[Magnesium L-Threonate] = 1.478%

28310130	Beef, broth, bouillon, or consommé, dry, not reconstituted
28310140	Beef, broth, bouillon, or consommé, low sodium, dry, not reconstituted
28340140	Chicken broth, bouillon, or consommé, dry, not reconstituted
75608300	Onion soup, dry mix, not reconstituted
75649060	Vegetable soup, dry mix, not reconstituted

Appendix 4

Estimated Daily Intake of Magnesium L-Threonate by the U.S. Population from Proposed Food-Uses (Revised Report)



Estimated Daily Intake of Magnesium L-Threonate by the U.S. Population from Proposed Food-Uses (Revised Report)

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Estimated Daily Intake of Magnesium L-Threonate by the U.S. Population from Proposed Food-Uses

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Estimated Daily Intake of Magnesium L-Threonate by the U.S. Population from Proposed Food-Uses

1.0 INTRODUCTION

Magnesium L-threonate is proposed for use in the United States (U.S.) as a nutritional source of magnesium in foods, such as alcoholic beverages, baked goods and baking mixes, beverages and beverage bases, breakfast cereals, chewing gum, grain products and pastas, hard candy, processed fruits and fruit juices, processed vegetables and vegetable juices, snack foods, soft candy, and soups and soup mixes.

Estimates for the intake of magnesium L-threonate were based on the proposed food-uses and use-levels in conjunction with food consumption data included in the US National Center for Health Statistics' (NCHS) National Health and Nutrition Examination Surveys (NHANES) (CDC, 2011; USDA, 2012). Calculations for the mean and 90th percentile all-person and all-user intakes were performed for each of the individual proposed food-uses of magnesium L-threonate and the percentage of consumers were determined. Similar calculations were used to estimate the total intake of magnesium L-threonate resulting from all proposed food-uses of magnesium L-threonate combined. In both cases, the per person and per kilogram body weight intakes were reported for the following population groups:

- infants, ages 0 to 2;
- children, ages 3 to 11;
- female teenagers, ages 12 to 19;
- male teenagers, ages 12 to 19;
- female adults, ages 20 and up;
- male adults, ages 20 and up; and
- total population (all age and gender groups combined).

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2.0 FOOD CONSUMPTION SURVEY DATA

2.1 Survey Description

NHANES for the years 2009-2010 are available for public use. NHANES are conducted as continuous, annual surveys, and are released in 2-year cycles. Each year about 7,000 people from 15 different locations across the U.S. are interviewed, and approximately 5,000 complete the health examination component of the survey. Any combination of consecutive years of data collection is recognized and used as a nationally representative sample of the U.S. population. It is well-established that the length of a dietary survey affects the estimated consumption of individual users and that short-term surveys, such as a 1-day dietary survey, may overestimate consumption compared to surveys conducted over longer time periods (Anderson, 1988). Because two 24-hour dietary recalls administered on 2 non-consecutive days are available from the NHANES 2009-2010 survey, these data were used to generate estimates for the current intake analysis.

NHANES 2009-2010 survey data were collected from individuals and households *via* 24-hour dietary recalls administered on 2 non-consecutive days (Day 1 and Day 2) throughout all 4 seasons of the year. Day 1 data were collected in-person, and Day 2 data were collected by telephone in the following 3 to 10 days, on different days of the week, to achieve the desired degree of statistical independence. The data were collected by first selecting Primary Sampling Units (PSUs), which were counties throughout the U.S., of which 15 PSUs are visited per year. Small counties were combined to attain a minimum population size. These PSUs were segmented and households were chosen within each segment. One or more participants within a household were interviewed. For NHANES 2009-2010, 13,272 individuals were selected for the sample, 10,537 were interviewed (79.4%), and 10,253 were sampled (77.3%).

In addition to collecting information on the types and quantities of foods being consumed, NHANES 2009-2010 collected socio-economic, physiological and demographic information from individual participants in the survey, such as sex, age, height and weight, and other variables useful in characterizing consumption. The inclusion of this information allows for further assessment of food intake based on consumption by specific population groups of interest within the total population. Sample weights were incorporated with NHANES 2009-2010 data to compensate for the potential under-representation of intakes from specific population groups as a result of sample variability due to survey design, differential non-response rates, or other factors, such as deficiencies in the sampling frame (CDC, 2011; USDA, 2012).

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2.2 Statistical Methods

Statistical analysis and data management were conducted in Creme software (www.cremeglobal.com) (Creme, 2013). Creme Food 3.6 is a probabilistic modeling software tool that uses high-performance computing to allow accurate estimates of exposure. The main input components are concentration (use level) data and food consumption data. Data sets are combined using the Creme Food 3.6 model to provide accurate and efficient exposure assessments.

For the deterministic assessment, consumption data from individual dietary records, detailing food items ingested by each survey participant, were collated by computer and used to generate estimates for the intake of magnesium L-threonate by the U.S. population using Creme software. Estimates for the daily intake of magnesium L-threonate represent projected 2-day averages for each individual from Day 1 and Day 2 of NHANES 2009-2010 data; these average amounts comprised the distribution from which mean and percentile intake estimates were generated. Mean and percentile estimates were generated incorporating survey weights in order to provide representative intakes for the entire U.S. population. All-person intake refers to the estimated intake of magnesium L-threonate averaged over all individuals surveyed, regardless of whether they potentially consumed food products containing magnesium L-threonate, and therefore includes individuals with “zero” intakes (*i.e.* those who reported no intake of food products containing magnesium L-threonate during the 2 survey days). All-user intake refers to the estimated intake of magnesium L-threonate by those individuals who reported consuming food products containing magnesium L-threonate, hence the “all-user” designation. Individuals were considered ‘users’ if they consumed 1 or more food products containing magnesium L-threonate on either Day 1 or Day 2 of the survey.

Mean or percentile intake estimates based on small sample sizes may be less statistically reliable than estimates based on adequate sample sizes (LSRO, 1995). Therefore, for the estimated intakes of magnesium L-threonate presented herein, values were considered statistically unreliable if the sample included less than 30 respondents. These values were not considered when assessing the relative contribution of specific food-uses to total magnesium L-threonate consumption and are marked with an asterisk in Appendices A and B.

3.0 FOOD USAGE DATA

The individual proposed food-uses and use-levels for magnesium L-threonate employed in the current intake analysis are summarized in Table 3-1. Food codes representative of each proposed food-use were chosen from the NHANES 2009-2010 (CDC, 2011; USDA, 2012). Food codes were grouped in food-use categories according to Title 21, Section §170.3 of the Code of Federal Regulations (CFR, 2012). Product-specific adjustment factors were developed based on data provided in the standard recipe file for the Continuing Survey of Food Intakes by Individuals (CSFII) 1994-1996, 1998 survey (USDA, 2000). All food codes included in the current intake assessment are listed in Appendix C.

Table 3-1 Summary of the Individual Proposed Uses and Use-Levels of Magnesium L-Threonate in the United States (NHANES 2009-2010)			
Food Category	Food-Uses	Mg Level (%)*	Mg L-Threonate Use-Levels (%)*
Alcoholic Beverages	Distilled Liquors	0.006815	0.0885
	Malted Beverages	0.006815	0.0885
	Wine	0.006815	0.0885
Baked Goods and Baking Mixes	Biscuits	0.00924	0.12
	Breads and Rolls, including bagels and pizza dough	0.00924	0.12
	Cakes and Cupcakes	0.00924	0.12
	Cookies and Brownies	0.00924	0.12
	Cornbread and Tortillas	0.00924	0.12
	Crackers	0.00924	0.12
	Muffins and English Muffins	0.00924	0.12
	Pancakes and Waffles	0.00924	0.12
	Pastries, including Doughnuts, Pies and Turnovers	0.00924	0.12
Beverages and Beverage Bases	Bottled Water	0.006815	0.0885
	Carbonated Fruit drinks	0.006815	0.0885
	Carbonated Soft Drinks	0.006815	0.0885
	Energy and Sports Drinks	0.006815	0.0885
	Fruit Drinks and Ades (RTD and powder)	0.006815	0.0885
Breakfast Cereals	Instant and Regular Hot Cereals	0.00924	0.12
	Ready-to-Eat Breakfast Cereals	0.00924	0.12
Chewing Gum	Chewing Gum	0.00924	0.12
Grain Products and Pastas	Cereal Grains, prepared (rice, corn, oats, rye, wheat, flour, etc)	0.00924	0.12
	Granola, Meal Replacement, and Breakfast Bars	0.00924	0.12
	Pasta and Noodles	0.00924	0.12

Table 3-1 Summary of the Individual Proposed Uses and Use-Levels of Magnesium L-Threonate in the United States (NHANES 2009-2010)			
Food Category	Food-Uses	Mg Level (%)*	Mg L-Threonate Use-Levels (%)*
Hard Candy	Hard Candy	0.00924	0.12
Processed Fruits and Fruit Juices	Fruit Juice	0.006815	0.0885
	Processed Fruits	0.00924	0.12
Processed Vegetables and Vegetable Juices	Vegetable Juice	0.006815	0.0885
Snack Foods	Salty Snacks	0.00924	0.12
Soft Candy	Chocolate and Candy Bars	0.00924	0.12
	Soft Candy	0.00924	0.12
Soups and Soup Mixes	Non-cream soups	0.003642	0.0473

*Magnesium L-threonate hydrate contains elemental magnesium on a molecular weight basis equivalent to 7.7%.

4.0 FOOD SURVEY RESULTS

Estimates for the total daily intakes of magnesium L-threonate from proposed food-uses are provided in Tables 4.1-1 and 4.1-2. Further to this, estimates for the total daily intakes of magnesium from the use of magnesium L-threonate in proposed food-uses are provided in Tables 4.2-1 and 4.2-2. Estimates for the daily intake of magnesium L-threonate from individual proposed food-uses in the U.S. are summarized in Tables A-1 to A-7 and B-1 to B-7 of Appendices A and B, respectively. Tables A-1 to A-7 provide estimates for the daily intake of magnesium L-threonate per person (mg/day), whereas Tables B-1 to B-7 provide estimates for the daily intake of magnesium L-threonate on a per kilogram body weight basis (mg/kg body weight/day).

4.3 Estimated Daily Intake of Magnesium L-Threonate from All Proposed Food-Uses in the U.S.

Table 4.1-1 summarizes the estimated total intake of magnesium L-threonate (mg/person/day) from all proposed food-uses in the U.S. population group. Table 4.1-2 presents this data on a per kilogram body weight basis (mg/kg body weight/day). The percentage of users was high among all age groups evaluated in the current intake assessment; greater than 81.0% of the population groups consisted of users of those food products in which magnesium L-threonate is currently proposed for use (Table 4.1-1). All population groups with the exception of infants and female adults were reported to consist wholly of consumers of products containing magnesium L-threonate, with percent users at 100%. Infants had the lowest percent users at 81.0%. Large user percentages within a population group typically lead to similar results for the all-person and

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all-user consumption estimates. Consequently, only the all-user intake results will be discussed in detail.

Among the total population, the mean and 90th percentile all-user intakes of magnesium L-threonate were determined to be 1,180 and 2,246 mg/person/day, respectively. Of the individual population groups, male adults were determined to have the greatest mean and 90th percentile all-user intakes of magnesium L-threonate on an absolute basis, at 1,522 and 2,827 mg/person/day, respectively, while infants had the lowest mean and 90th percentile all-user intakes of 439 and 927 mg/person/day, respectively (Table 4.1-1).

Table 4.1-1 Summary of the Estimated Daily Intake of Magnesium L-Threonate from All Proposed Food-Uses in the U.S. by Population Group (2009-2010 NHANES Data)

Population Group	Age (years)	All Person (mg)		All User (mg)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	356	868	81.0	672	439	927
Children	3 to 11	763	1,265	100.0	1,430	763	1,265
Female Teenagers	12 to 19	1,043	1,683	100.0	520	1,043	1,683
Male Teenagers	12 to 19	1,352	2,521	100.0	567	1,352	2,521
Female Adults	20 and up	1,066	1,955	99.9	2,647	1,067	1,962
Male Adults	20 and up	1,522	2,827	100.0	2,387	1,522	2,827
Total Population	All Ages	1,169	2,244	99.1	8,223	1,180	2,246

On a body weight basis, infants were identified as having the highest mean and 90th percentile all-user intakes of any population group, of 35.7 and 70.5 mg/kg body weight/day, respectively. Female adults had the lowest mean and 90th percentile all-user intakes of 14.7 and 28.2 mg/kg body weight/day, respectively (Table 4.1-2).

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Table 4.1-2 Summary of the Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from All Proposed Food-Uses in the U.S. by Population Group (2009-2010 NHANES Data)							
Population Group	Age (years)	All Person (mg/kg bw)		All User (mg/kg bw)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	28.9	67.3	81.0	672	35.7	70.5
Children	3 to 11	28.5	49.5	100.0	1,430	28.5	49.5
Female Teenagers	12 to 19	17.5	31.2	100.0	520	17.5	31.2
Male Teenagers	12 to 19	20.0	35.7	100.0	567	20.0	35.7
Female Adults	20 and up	14.7	28.2	99.9	2,647	14.7	28.2
Male Adults	20 and up	17.5	31.9	100.0	2,387	17.5	31.9
Total Population	All Ages	18.4	35.3	99.1	8,223	18.6	35.3

4.4 Estimated Daily Intake of Magnesium from All Proposed Food-Uses of Magnesium L-Threonate in the U.S.

Magnesium L-threonate hydrate contains elemental magnesium on a molecular weight basis equivalent to 7.7%. As a result, the estimated daily intake of magnesium was determined from the estimated daily intakes of magnesium L-threonate. Table 4.2-1 summarizes the estimated total intake of magnesium (mg/person/day) from all proposed food-uses of magnesium L-threonate in the U.S. population group and Table 4.2-2 presents this data on a per kilogram body weight basis (mg/kg body weight/day).

Among the total population, the mean and 90th percentile all-user intakes of magnesium from all proposed food-uses of magnesium L-threonate were determined to be 91 and 173 mg/person/day, respectively. As with the results for magnesium L-threonate, male adults were determined to have the greatest mean and 90th percentile all-user intakes of magnesium on an absolute basis, at 117 and 218 mg/person/day, respectively, while infants had the lowest mean and 90th percentile all-user intakes of 34 and 71 mg/person/day, respectively (Table 4.2-1).

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Table 4.2-1 Summary of the Estimated Daily Intake of Magnesium from All Proposed Food-Uses of Magnesium L-Threonate in the U.S. by Population Group (2009-2010 NHANES Data)

Population Group	Age (years)	All Person (mg)		All User (mg)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	27	67	81.0	672	34	71
Children	3 to 11	59	97	100.0	1,430	59	97
Female Teenagers	12 to 19	80	130	100.0	520	80	130
Male Teenagers	12 to 19	104	194	100.0	567	104	194
Female Adults	20 and up	82	151	99.9	2,647	82	151
Male Adults	20 and up	117	218	100.0	2,387	117	218
Total Population	All Ages	90	173	99.1	8,223	91	173

Furthermore, on a body weight basis, infants were identified as having the highest mean and 90th percentile all-user intakes of magnesium of any population group, of 2.7 and 5.4 mg/kg body weight/day, respectively. Female adults had the lowest mean and 90th percentile all-user intakes of magnesium, of 1.1 and 2.2 mg/kg body weight/day, respectively (Table 4.2-2).

Table 4.2-2 Summary of the Estimated Daily Per Kilogram Body Weight Intake of Magnesium from All Proposed Food-Uses of Magnesium L-Threonate in the U.S. by Population Group (2009-2010 NHANES Data)

Population Group	Age (years)	All Person (mg/kg bw)		All User (mg/kg bw)			
		Mean	90 th Percentile	Percent Users	Actual # of Users	Mean	90 th Percentile
Infants	0 to 2	2.2	5.2	81.0	672	2.7	5.4
Children	3 to 11	2.2	3.8	100.0	1,430	2.2	3.8
Female Teenagers	12 to 19	1.3	2.4	100.0	520	1.3	2.4
Male Teenagers	12 to 19	1.5	2.7	100.0	567	1.5	2.7
Female Adults	20 and up	1.1	2.2	99.9	2,647	1.1	2.2
Male Adults	20 and up	1.4	2.5	100.0	2,387	1.4	2.5
Total Population	All Ages	1.4	2.7	99.1	8,223	1.4	2.7

4.5 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses in the U.S.

Estimates for the mean and 90th percentile daily intakes of magnesium L-threonate from each individual food category are summarized in Tables A-1 to A-7 and B-1 to B-7 on a mg/day and

mg/kg body weight/day basis, respectively. The total U.S. population was identified as being significant consumers of breads and rolls (50.8 to 91.7% users), bottled water (34.2 to 55.2% users), and carbonated soft drinks (6.2 to 53.4% users).

In terms of contribution to total mean intake of magnesium L-threonate, bottled water (contributed 23.5 to 32.1% to total mean intakes) and carbonated soft drinks (contributed 12.8 to 17.5% to total mean intakes) were the 2 main sources of intake among female and male teenagers and female and male adults on both an absolute and on a mg/kg body weight basis. Among infants, the consumption of bottled water (17.6% to the total mean intakes) and fruit juice (25.3% to the total mean intakes) made the greatest contribution to the intakes on an absolute and mg/kg body weight basis, while among children, the consumption of bottled water (19.1% to the total mean intakes) and fruit drinks and ades (14.2% to the total mean intakes) made the greatest contributions to the intakes on an absolute and mg/kg body weight basis. Chewing gum and hard candy each individually contributed $\leq 0.3\%$ to total mean magnesium L-threonate intakes across all population groups (see Tables A-1 to A-7 and/or B-1 to B-7 for further details).

5.0 CONCLUSIONS

Consumption data and information pertaining to the individual proposed food-uses of magnesium L-threonate were used to estimate the all-person and all-user intakes of magnesium L-threonate for specific demographic groups and for the total U.S. population. This type of intake methodology is generally considered to be 'worst case' as a result of several conservative assumptions made in the consumption estimates. For example, it is often assumed that all food products within a food category contain the ingredient at the maximum specified level of use. In addition, it is well-established that the length of a dietary survey affects the estimated consumption of individual users. Short-term surveys, such as the typical 2- or 3-day dietary surveys, may overestimate the consumption of food products that are consumed relatively infrequently.

In summary, on an all-user basis, the estimated mean and 90th percentile all-user intakes of magnesium L-threonate were determined to be 1,180 and 2,246 mg/person/day (18.6 and 35.3 mg/kg body weight/day, respectively), respectively, in the total U.S. population. Furthermore, the highest mean and 90th percentile intakes of magnesium L-threonate by the U.S. population from all proposed food-uses in the U.S., as observed in male adults were estimated to be 1,522 mg/person/day (17.5 mg/kg body weight/day) and 2,827 mg/person/day (31.9 mg/kg body weight/day), respectively. Infants had the lowest mean and 90th percentile all-user intakes of

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magnesium L-threonate at 439 mg/person/day (35.7 mg/kg body weight/day) and 927 mg/person/day (70.5 mg/kg body weight/day), respectively.

The estimated daily intakes of magnesium also were determined in this assessment. Among the total population, the mean and 90th percentile all-user intakes of magnesium from all proposed food-uses of magnesium L-threonate were determined to be 91 mg/person/day (1.4 mg/kg body weight/day) and 173 mg/person/day (2.7 mg/kg body weight/day). As with the results for magnesium L-threonate, male adults were determined to have the greatest mean and 90th percentile all-user intakes of magnesium on an absolute basis, at 117 and 218 mg/person/day, respectively. Infants were determined to have the lowest mean and 90th percentile all-user intakes of magnesium at 34 and 71 mg/person/day, respectively.

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APPENDIX A

**Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed
Food-Uses by Different Population Groups Within the U.S. (NHANES 2009-2010
data)**

Table A-1 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Infants Aged 0 to 2 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	356	868	81.0	672	439	927
<u>Alcoholic beverages</u>							
Distilled Liquors	0	na	na	0	0	na	na
Malted Beverages	0	na	na	0	0	na	na
Wine	0	na	na	0	0	na	na
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	1*	na	3.1	18	24*	33*
Breads and Rolls	5.7	20	56	50.8	394	40	83
Cakes and Cupcakes	0.4	1	na	5.5	35	26	51
Cookies and Brownies	1.3	5	13	23.6	204	19	41
Cornbread and Tortillas	1.1	4	14	16.9	180	23	54
Crackers	2.2	8	24	46.4	341	17	36
Muffins and English Muffins	0.5	2*	na	5.4	24	33*	54*
Pancakes and Waffles	1.7	6	22	13.9	101	44	82
Pastries	1.1	4	8	10.7	70	36	76
<u>Beverages and Beverage Bases</u>							
Bottled Water	17.6	62	231	34.2	302	183	369
Carbonated Fruit Drinks	1.5	6	na	7.4	53	75	131
Carbonated Soft Drinks	0.9	3	na	6.2	53	50	106
Energy and Sports Drinks	1.7	6	na	4.0	36	153	358
Fruit Drinks and Aides	12.4	44	163	24.9	202	177	364
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	4.4	16	47	11.2	83	139	226
Ready-to-Eat Breakfast Cereals	2.3	8	26	47.5	362	17	34
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1*	na	0.2	4	2*	2*
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.3	12	36	25.6	214	46	98
Granola, Meal Replacement, and Breakfast Bars	0.5	2	na	8.0	46	21	30
Pasta and Noodles	6.7	24	78	36.5	256	65	129
<u>Hard Candy</u>							
Hard Candy	0.3	1	na	9.1	67	10	18

Table A-1 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Infants Aged 0 to 2 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	25.3	90	278	47.8	412	188	400
Processed Fruits	3.2	11	43	18.5	113	61	120
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	1.0	4*	na	2.9	14	123*	261*
<u>Snack Foods</u>							
Salty Snacks	1.4	5	15	27.4	215	18	42
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.2	1	na	9.5	64	9	17
Soft Candy	0.7	2	8	14.3	113	16	31
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	2.6	9	41	17.7	186	51	102

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table A-2 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Children Aged 3 to 11 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	763	1,265	100.0	1,430	763	1,265
<u>Alcoholic beverages</u>							
Distilled Liquors	0	na	na	0	0	na	na
Malted Beverages	0	na	na	0	0	na	na
Wine	< 0.1	< 1*	na	0.2	1	6*	6*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.3	2	na	6.4	86	33	57
Breads and Rolls	9.5	73	143	91.0	1,278	80	150
Cakes and Cupcakes	0.6	5	17	11.0	150	43	77
Cookies and Brownies	1.7	13	39	41.4	572	31	70
Cornbread and Tortillas	1.7	13	44	28.7	510	46	94
Crackers	1.1	8	28	36.4	493	23	47
Muffins and English Muffins	0.6	4	na	5.4	64	82	156
Pancakes and Waffles	2.0	15	52	28.4	344	54	94
Pastries	1.6	12	45	20.7	281	60	130
<u>Beverages and Beverage Bases</u>							
Bottled Water	19.1	146	438	46.0	700	317	649
Carbonated Fruit Drinks	5.9	45	162	26.0	382	174	324
Carbonated Soft Drinks	7.2	55	161	32.3	452	169	322
Energy and Sports Drinks	2.3	17	na	7.9	105	220	427
Fruit Drinks and Aides	14.2	108	316	50.8	791	213	431
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.3	10	na	7.0	104	143	263
Ready-to-Eat Breakfast Cereals	2.7	21	53	61.3	934	34	63
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	4.2	66	3	5
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.1	24	87	30.9	504	77	163
Granola, Meal Replacement, and Breakfast Bars	0.4	3	14	12.3	141	25	45
Pasta and Noodles	5.5	42	128	42.0	574	100	205
<u>Hard Candy</u>							
Hard Candy	0.3	2	8	16.4	206	13	24

Table A-2 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Children Aged 3 to 11 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	11.5	88	220	56.1	853	157	292
Processed Fruits	1.8	14	54	18.8	260	75	160
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.4	3*	na	1.9	24	167*	285*
<u>Snack Foods</u>							
Salty Snacks	2.0	16	45	52.1	728	30	59
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.6	4	16	21.2	274	21	49
Soft Candy	0.6	5	17	24.0	313	21	45
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.8	14	60	18.1	301	78	124

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

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Table A-3 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,043	1,683	100.0	520	1,043	1,683
<u>Alcoholic beverages</u>							
Distilled Liquors	0.1	1*	na	0.5	4	100*	110*
Malted Beverages	2.2	23*	na	2.4	9	939*	1,951*
Wine	0.2	2*	na	1.7	2	138*	209*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.4	4*	na	6.1	24	63*	96*
Breads and Rolls	7.3	76	150	89.9	455	84	153
Cakes and Cupcakes	0.8	8	24	13.2	68	61	120
Cookies and Brownies	0.9	10	33	31.6	181	30	58
Cornbread and Tortillas	1.4	15	46	31.9	187	47	84
Crackers	0.4	4	16	19.5	83	22	46
Muffins and English Muffins	0.3	3*	na	6.4	25	45*	78*
Pancakes and Waffles	0.9	9	44	14.0	61	67	112
Pastries	1.5	15	52	20.9	110	74	175
<u>Beverages and Beverage Bases</u>							
Bottled Water	27.7	289	798	55.2	302	524	1,092
Carbonated Fruit Drinks	9.1	95	297	36.7	201	260	554
Carbonated Soft Drinks	12.8	134	408	42.3	213	317	659
Energy and Sports Drinks	2.7	28	107	12.8	63	219	391
Fruit Drinks and Aides	9.7	101	305	38.4	223	262	608
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	0.6	6*	na	3.4	20	185*	306*
Ready-to-Eat Breakfast Cereals	1.6	17	54	40.7	218	41	62
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	8.0	40	3	5
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.4	25	105	27.9	180	90	190
Granola, Meal Replacement, and Breakfast Bars	0.2	2	12	10.7	45	20	27
Pasta and Noodles	5.6	58	218	40.3	177	144	308
<u>Hard Candy</u>							
Hard Candy	0.1	1	na	9.6	57	13	22

Table A-3 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	7.3	76	218	41.5	247	184	340
Processed Fruits	0.6	6	na	10.0	45	63	103
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.1	1*	na	0.8	6	81*	209*
<u>Snack Foods</u>							
Salty Snacks	1.5	15	44	44.6	247	35	64
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.6	7	26	24.6	120	27	56
Soft Candy	0.3	3	8	14.4	78	21	49
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	0.8	8	na	8.8	76	90	166

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

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Table A-4 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,352	2,521	100.0	567	1,352	2,521
<u>Alcoholic beverages</u>							
Distilled Liquors	0.2	2*	na	1.3	8	180*	313*
Malted Beverages	1.9	26*	na	2.7	20	964*	1,524*
Wine	<0.1	< 1*	na	0.1	2	129*	202*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.3	4	na	6.8	32	52	86
Breads and Rolls	9.2	124	250	91.7	523	136	250
Cakes and Cupcakes	0.2	3	na	7.1	33	46	102
Cookies and Brownies	0.8	10	40	30.5	190	34	59
Cornbread and Tortillas	1.5	21	67	32.4	222	65	138
Crackers	0.2	3	8	13.4	74	25	55
Muffins and English Muffins	0.2	2*	na	3.2	27	71*	102*
Pancakes and Waffles	1.1	15	63	18.1	93	81	149
Pastries	1.4	19	65	21.5	109	89	167
<u>Beverages and Beverage Bases</u>							
Bottled Water	25.0	338	950	51.5	305	657	1,558
Carbonated Fruit Drinks	11.0	149	486	34.0	206	438	863
Carbonated Soft Drinks	14.1	191	538	47.2	256	404	756
Energy and Sports Drinks	5.2	71	256	19.4	94	364	861
Fruit Drinks and Ades	7.8	105	330	36.5	217	287	645
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	0.4	6*	na	2.6	17	221*	293*
Ready-to-Eat Breakfast Cereals	1.7	23	72	44.3	261	52	112
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1*	na	5.1	28	2*	5*
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.8	51	131	31.7	199	160	332
Granola, Meal Replacement, and Breakfast Bars	0.1	2	na	6.9	43	26	43
Pasta and Noodles	2.9	39	137	32.3	181	120	222
<u>Hard Candy</u>							
Hard Candy	0.1	1	na	7.4	37	19	44

Table A-4 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	6.0	81	272	35.2	244	230	476
Processed Fruits	0.4	6	na	6.1	35	98	177
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.1	1*	na	1.0	8	134*	161*
<u>Snack Foods</u>							
Salty Snacks	1.8	24	64	51.9	270	47	88
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	6	27	19.0	109	32	68
Soft Candy	0.6	8	18	15.0	79	51	114
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.5	20	87	16.4	100	121	225

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

000216

Table A-5 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,066	1,955	99.9	2,647	1,067	1,962
<u>Alcoholic beverages</u>							
Distilled Liquors	0.4	5	na	6.3	156	73	146
Malted Beverages	3.1	33	na	9.3	212	359	788
Wine	1.9	21	64	13.5	276	152	315
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	2	na	5.7	155	37	59
Breads and Rolls	6.7	71	152	88.6	2,313	80	160
Cakes and Cupcakes	0.7	8	24	13.8	338	57	107
Cookies and Brownies	0.8	9	30	32.1	845	27	54
Cornbread and Tortillas	1.5	16	54	26.5	834	61	135
Crackers	0.6	6	20	30.6	782	19	39
Muffins and English Muffins	0.4	5	na	8.7	181	55	104
Pancakes and Waffles	0.5	5	na	8.3	248	64	109
Pastries	1.4	15	56	18.1	449	80	164
<u>Beverages and Beverage Bases</u>							
Bottled Water	32.1	343	1,087	50.7	1,415	676	1,440
Carbonated Fruit Drinks	5.5	59	162	17.6	510	333	701
Carbonated Soft Drinks	17.5	186	599	48.3	1,214	386	778
Energy and Sports Drinks	0.9	10	na	4.1	112	248	535
Fruit Drinks and Aides	5.8	61	217	24.0	677	256	552
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	2.7	29	140	16.1	434	182	296
Ready-to-Eat Breakfast Cereals	1.4	14	51	36.7	941	39	71
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	3.8	94	3	7
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.7	29	98	34.3	966	85	188
Granola, Meal Replacement, and Breakfast Bars	0.2	2	na	9.1	183	25	43
Pasta and Noodles	2.7	29	104	28.5	710	101	198
<u>Hard Candy</u>							
Hard Candy	0.1	1	na	6.1	160	18	52

Table A-5 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	5.3	56	197	36.1	1,027	156	327
Processed Fruits	1.0	11	31	18.2	412	59	143
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.4	5	na	3.2	79	143	246
<u>Snack Foods</u>							
Salty Snacks	1.0	11	36	33.0	821	33	68
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.6	6	23	24.9	588	24	52
Soft Candy	0.2	3	3	11.5	279	23	53
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.5	16	67	18.0	537	88	169

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

000218

Table A-6 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,522	2,827	100.0	2,387	1,522	2,827
<u>Alcoholic beverages</u>							
Distilled Liquors	0.7	11	18	11.4	232	97	238
Malted Beverages	14.4	220	788	31.1	655	707	1,472
Wine	0.9	14	13	10.7	216	129	270
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	4	na	6.8	142	52	99
Breads and Rolls	7.1	107	226	90.5	2,127	119	236
Cakes and Cupcakes	0.6	9	23	12.4	271	71	132
Cookies and Brownies	0.7	11	40	30.1	762	37	77
Cornbread and Tortillas	1.5	23	79	26.6	754	87	180
Crackers	0.3	5	18	20.3	451	24	48
Muffins and English Muffins	0.3	5	na	6.4	144	70	139
Pancakes and Waffles	0.4	7	na	8.6	189	79	155
Pastries	1.4	21	80	22.0	498	94	182
<u>Beverages and Beverage Bases</u>							
Bottled Water	23.5	358	1,213	44.6	1,101	802	1,801
Carbonated Fruit Drinks	6.0	92	324	22.6	549	406	863
Carbonated Soft Drinks	16.7	255	752	53.4	1,238	477	968
Energy and Sports Drinks	2.7	41	131	10.8	219	377	749
Fruit Drinks and Ades	5.3	81	289	24.1	585	334	692
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.7	26	99	11.5	305	229	451
Ready-to-Eat Breakfast Cereals	1.2	18	61	34.3	774	53	96
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	2.9	63	5	17
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.0	46	148	34.5	855	135	298
Granola, Meal Replacement, and Breakfast Bars	0.2	3	na	7.7	145	34	62
Pasta and Noodles	2.4	36	131	27.8	605	129	249
<u>Hard Candy</u>							
Hard Candy	0.1	1	na	5.4	136	22	41

Table A-6 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	4.7	71	238	36.8	895	193	383
Processed Fruits	0.7	11	22	13.7	315	81	197
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.5	7	na	4.1	80	174	318
<u>Snack Foods</u>							
Salty Snacks	1.0	15	49	34.1	688	43	86
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	6	24	20.4	459	29	62
Soft Candy	0.1	2	na	7.2	165	24	41
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.2	19	74	16.7	422	113	208

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

000220

Table A-7 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by the Total US Population (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	1,169	2,244	99.1	8,223	1,180	2,246
<u>Alcoholic beverages</u>							
Distilled Liquors	0.5	6	na	6.4	400	89	194
Malted Beverages	7.8	92	315	14.6	896	628	1,261
Wine	1.1	13	na	9.0	497	142	305
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	3	na	6.1	457	44	86
Breads and Rolls	7.2	84	180	88.1	7,090	96	189
Cakes and Cupcakes	0.6	7	21	12.2	895	59	120
Cookies and Brownies	0.9	10	36	32.0	2,754	31	67
Cornbread and Tortillas	1.5	18	60	27.0	2,687	66	143
Crackers	0.5	6	20	26.9	2,224	21	46
Muffins and English Muffins	0.4	4	na	7.0	465	61	108
Pancakes and Waffles	0.7	8	29	11.9	1,036	65	117
Pastries	1.4	16	65	19.8	1,517	82	170
<u>Beverages and Beverage Bases</u>							
Bottled Water	26.4	308	986	47.6	4,125	648	1,494
Carbonated Fruit Drinks	6.2	73	236	21.8	1,901	334	713
Carbonated Soft Drinks	15.7	183	558	45.8	3,426	400	828
Energy and Sports Drinks	2.2	26	na	8.2	629	314	641
Fruit Drinks and Ades	6.6	77	263	28.7	2,695	269	561
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.9	23	95	11.7	963	194	325
Ready-to-Eat Breakfast Cereals	1.4	17	55	39.9	3,490	42	76
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 1	na	3.7	295	4	7
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.0	35	117	33.1	2,918	105	226
Granola, Meal Replacement, and Breakfast Bars	0.2	2	na	8.9	603	27	47
Pasta and Noodles	3.0	35	117	31.1	2,503	112	232
<u>Hard Candy</u>							
Hard Candy	0.1	1	na	7.5	663	17	34

Table A-7 Estimated Daily Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by the Total US Population (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/day)		All-Users Consumption (mg/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	5.9	69	218	39.5	3,678	175	348
Processed Fruits	0.9	11	32	15.6	1,180	69	151
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.4	5	na	3.1	211	157	287
<u>Snack Foods</u>							
Salty Snacks	1.1	13	43	37.1	2,969	36	73
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.5	6	22	21.9	1,614	26	53
Soft Candy	0.2	3	5	12.0	1,027	24	53
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.4	16	64	16.9	1,622	95	184

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

APPENDIX B

**Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate
from Individual Proposed Food-Uses by Different Population
Groups Within the U.S. (2009-2010 NHANES Data)**

Table B-1 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Infants Aged 0 to 2 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	28.9	67.3	81.0	672	35.7	70.5
<u>Alcoholic beverages</u>							
Distilled Liquors	0	na	na	0	0	na	na
Malted Beverages	0	na	na	0	0	na	na
Wine	0	na	na	0	0	na	na
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	0.1*	na	3.1	18	2.0*	2.9*
Breads and Rolls	5.7	1.6	4.6	50.8	394	3.2	6.8
Cakes and Cupcakes	0.4	0.1	na	5.5	35	2.0	4.7
Cookies and Brownies	1.3	0.4	1.1	23.6	204	1.5	3.4
Cornbread and Tortillas	1.1	0.3	1.1	16.9	180	1.9	4.1
Crackers	2.2	0.7	1.8	46.4	341	1.4	2.8
Muffins and English Muffins	0.5	0.1*	na	5.4	24	2.8*	5.1*
Pancakes and Waffles	1.7	0.5	1.6	13.9	101	3.6	7.2
Pastries	1.1	0.3	0.6	10.7	70	3.0	7.6
<u>Beverages and Beverage Bases</u>							
Bottled Water	17.6	5.0	17.9	34.2	302	14.7	33.5
Carbonated Fruit Drinks	1.5	0.4	na	7.4	53	5.8	11.4
Carbonated Soft Drinks	0.9	0.2	na	6.2	53	4.0	7.8
Energy and Sports Drinks	1.7	0.6	na	4.0	36	14.3	34.4
Fruit Drinks and Ades	12.4	3.4	13.0	24.9	202	13.6	25.9
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	4.4	1.3	3.7	11.2	83	11.8	19.9
Ready-to-Eat Breakfast Cereals	2.3	0.7	2.1	47.5	362	1.4	2.6
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 0.1*	na	0.2	4	0.1*	0.1*
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.3	1.0	3.0	25.6	214	3.7	8.4
Granola, Meal Replacement, and Breakfast Bars	0.5	0.1	na	8.0	46	1.7	2.5
Pasta and Noodles	6.7	2.0	6.4	36.5	256	5.5	10.8
<u>Hard Candy</u>							
Hard Candy	0.3	0.1	na	9.1	67	0.8	1.4

Table B-1 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Infants Aged 0 to 2 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	25.3	7.3	22.9	47.8	412	15.3	32.4
Processed Fruits	3.2	1.0	3.5	18.5	113	5.2	10.9
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	1.0	0.3*	na	2.9	14	9.8*	27.8*
<u>Snack Foods</u>							
Salty Snacks	1.4	0.4	1.0	27.4	215	1.4	3.2
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.2	0.1	na	9.5	64	0.7	1.4
Soft Candy	0.7	0.2	0.6	14.3	113	1.3	2.5
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	2.6	0.8	3.3	17.7	186	4.3	8.8

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

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Table B-2 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Children Aged 3 to 11 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	28.5	49.5	100.0	1,430	28.5	49.5
<u>Alcoholic beverages</u>							
Distilled Liquors	0	na	na	0	0	na	na
Malted Beverages	0	na	na	0	0	na	na
Wine	< 0.1	< 0.1*	na	0.2	1	0.2*	0.2*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.3	0.1	na	6.4	86	1.4	2.0
Breads and Rolls	9.5	2.6	5.3	91.0	1,278	2.9	5.5
Cakes and Cupcakes	0.6	0.2	0.5	11.0	150	1.6	3.0
Cookies and Brownies	1.7	0.5	1.6	41.4	572	1.2	2.3
Cornbread and Tortillas	1.7	0.5	1.7	28.7	510	1.6	3.4
Crackers	1.1	0.4	1.2	36.4	493	1.0	2.0
Muffins and English Muffins	0.6	0.1	na	5.4	64	2.6	5.6
Pancakes and Waffles	2.0	0.6	2.1	28.4	344	2.0	3.8
Pastries	1.6	0.5	1.7	20.7	281	2.2	4.3
<u>Beverages and Beverage Bases</u>							
Bottled Water	19.1	5.1	14.6	46.0	700	11.1	23.4
Carbonated Fruit Drinks	5.9	1.5	5.2	26.0	382	5.7	10.9
Carbonated Soft Drinks	7.2	1.8	5.9	32.3	452	5.5	10.7
Energy and Sports Drinks	2.3	0.6	na	7.9	105	7.5	15.6
Fruit Drinks and Ades	14.2	4.3	12.0	50.8	791	8.4	17.7
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.3	0.4	na	7.0	104	6.2	10.5
Ready-to-Eat Breakfast Cereals	2.7	0.8	2.1	61.3	934	1.3	2.6
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 0.1	na	4.2	66	0.1	0.2
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.1	1.0	3.1	30.9	504	3.2	7.2
Granola, Meal Replacement, and Breakfast Bars	0.4	0.1	0.4	12.3	141	1.0	1.6
Pasta and Noodles	5.5	1.6	5.2	42.0	574	3.9	8.0
<u>Hard Candy</u>							
Hard Candy	0.3	0.1	0.3	16.4	206	0.5	0.9

Table B-2 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Children Aged 3 to 11 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	11.5	3.7	9.8	56.1	853	6.5	12.9
Processed Fruits	1.8	0.6	1.9	18.8	260	3.3	7.3
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.4	0.1*	na	1.9	24	7.0*	12.2*
<u>Snack Foods</u>							
Salty Snacks	2.0	0.5	1.5	52.1	728	1.0	2.0
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.6	0.2	0.7	21.2	274	0.8	1.9
Soft Candy	0.6	0.2	0.7	24.0	313	0.8	1.7
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.8	0.5	2.3	18.1	301	3.0	5.1

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table B-3 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	17.5	31.2	100.0	520	17.5	31.2
<u>Alcoholic beverages</u>							
Distilled Liquors	0.1	< 0.1*	na	0.5	4	1.5*	2.1*
Malted Beverages	2.2	0.4*	na	2.4	9	16.8*	35.0*
Wine	0.2	< 0.1*	na	1.7	2	2.4*	3.7*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.4	0.1*	na	6.1	24	0.9*	1.5*
Breads and Rolls	7.3	1.3	2.6	89.9	455	1.4	2.7
Cakes and Cupcakes	0.8	0.1	0.4	13.2	68	1.0	1.8
Cookies and Brownies	0.9	0.2	0.5	31.6	181	0.6	1.2
Cornbread and Tortillas	1.4	0.3	0.8	31.9	187	0.8	1.7
Crackers	0.4	0.1	0.3	19.5	83	0.4	0.8
Muffins and English Muffins	0.3	< 0.1*	na	6.4	25	0.8*	1.3*
Pancakes and Waffles	0.9	0.2	0.7	14.0	61	1.2	2.1
Pastries	1.5	0.3	0.8	20.9	110	1.3	3.1
<u>Beverages and Beverage Bases</u>							
Bottled Water	27.7	4.7	14.2	55.2	302	8.6	17.7
Carbonated Fruit Drinks	9.1	1.5	5.4	36.7	201	4.2	8.9
Carbonated Soft Drinks	12.8	2.3	7.0	42.3	213	5.4	12.1
Energy and Sports Drinks	2.7	0.4	1.4	12.8	63	3.5	5.3
Fruit Drinks and Ades	9.7	1.7	5.4	38.4	223	4.4	9.6
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	0.6	0.1*	na	3.4	20	3.2*	5.5*
Ready-to-Eat Breakfast Cereals	1.6	0.3	0.9	40.7	218	0.7	1.2
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 0.1	na	8.0	40	<0.1	0.1
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.4	0.4	1.5	27.9	180	1.5	3.6
Granola, Meal Replacement, and Breakfast Bars	0.2	< 0.1	0.2	10.7	45	0.4	0.5
Pasta and Noodles	5.6	1.0	3.6	40.3	177	2.5	5.3
<u>Hard Candy</u>							
Hard Candy	0.1	< 0.1	na	9.6	57	0.2	0.4

Table B-3 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	7.3	1.3	3.6	41.5	247	3.1	5.9
Processed Fruits	0.6	0.1	na	10.0	45	1.1	1.8
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.1	< 0.1*	na	0.8	6	1.4*	2.6*
<u>Snack Foods</u>							
Salty Snacks	1.5	0.3	0.7	44.6	247	0.6	1.2
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.6	0.1	0.4	24.6	120	0.5	1.0
Soft Candy	0.3	0.1	0.1	14.4	78	0.4	0.9
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	0.8	0.1	na	8.8	76	1.5	2.6

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

Table B-4 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	20.0	35.7	100.0	567	20.0	35.7
<u>Alcoholic beverages</u>							
Distilled Liquors	0.2	< 0.1*	na	1.3	8	2.3*	3.9*
Malted Beverages	1.9	0.3*	na	2.7	20	12.7*	20.5*
Wine	< 0.1	< 0.1*	na	0.1	2	1.8*	2.9*
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.3	< 0.1	na	6.8	32	0.7	1.2
Breads and Rolls	9.2	1.9	4.2	91.7	523	2.1	4.3
Cakes and Cupcakes	0.2	0.1	na	7.1	33	0.7	1.4
Cookies and Brownies	0.8	0.2	0.6	30.5	190	0.5	0.9
Cornbread and Tortillas	1.5	0.3	0.9	32.4	222	1.0	2.1
Crackers	0.2	< 0.1	0.1	13.4	74	0.4	0.8
Muffins and English Muffins	0.2	< 0.1*	na	3.2	27	1.1*	1.6*
Pancakes and Waffles	1.1	0.2	1.0	18.1	93	1.4	2.5
Pastries	1.4	0.3	1.1	21.5	109	1.4	2.2
<u>Beverages and Beverage Bases</u>							
Bottled Water	25.0	5.0	14.9	51.5	305	9.8	21.3
Carbonated Fruit Drinks	11.0	2.1	8.5	34.0	206	6.3	11.6
Carbonated Soft Drinks	14.1	2.7	7.8	47.2	256	5.8	11.6
Energy and Sports Drinks	5.2	1.0	3.5	19.4	94	4.9	10.3
Fruit Drinks and Ades	7.8	1.5	4.7	36.5	217	4.2	9.0
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	0.4	0.1*	na	2.6	17	4.1*	7.5*
Ready-to-Eat Breakfast Cereals	1.7	0.4	1.0	44.3	261	0.8	1.6
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 0.1*	na	5.1	28	< 0.1*	0.1*
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.8	0.8	1.9	31.7	199	2.6	5.4
Granola, Meal Replacement, and Breakfast Bars	0.1	< 0.1	na	6.9	43	0.4	0.6
Pasta and Noodles	2.9	0.6	2.1	32.3	181	1.8	3.4
<u>Hard Candy</u>							
Hard Candy	0.1	< 0.1	na	7.4	37	0.3	0.7

Table B-4 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Teenagers Aged 12 to 19 Years Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	6.0	1.2	4.4	35.2	244	3.5	6.7
Processed Fruits	0.4	0.1	na	6.1	35	1.5	3.0
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.1	< 0.1*	na	1.0	8	2.2*	2.9*
<u>Snack Foods</u>							
Salty Snacks	1.8	0.4	1.1	51.9	270	0.7	1.5
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	0.1	0.4	19.0	109	0.5	0.9
Soft Candy	0.6	0.1	0.3	15.0	79	0.8	1.8
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.5	0.3	1.2	16.4	100	1.7	3.3

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

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Table B-5 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	14.7	28.2	99.9	2,647	14.7	28.2
<u>Alcoholic beverages</u>							
Distilled Liquors	0.4	0.1	na	6.3	156	1.0	2.1
Malted Beverages	3.1	0.5	na	9.3	212	5.2	10.9
Wine	1.9	0.3	0.9	13.5	276	2.2	4.6
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	< 0.1	na	5.7	155	0.5	0.8
Breads and Rolls	6.7	1.0	2.1	88.6	2,313	1.1	2.2
Cakes and Cupcakes	0.7	0.1	0.3	13.8	338	0.8	1.7
Cookies and Brownies	0.8	0.1	0.4	32.1	845	0.4	0.8
Cornbread and Tortillas	1.5	0.2	0.7	26.5	834	0.9	1.9
Crackers	0.6	0.1	0.3	30.6	782	0.3	0.6
Muffins and English Muffins	0.4	0.1	na	8.7	181	0.8	1.4
Pancakes and Waffles	0.5	0.1	na	8.3	248	0.9	1.6
Pastries	1.4	0.2	0.8	18.1	449	1.1	2.3
<u>Beverages and Beverage Bases</u>							
Bottled Water	32.1	4.7	14.3	50.7	1,415	9.3	20.7
Carbonated Fruit Drinks	5.5	0.8	2.6	17.6	510	4.5	9.8
Carbonated Soft Drinks	17.5	2.5	7.4	48.3	1,214	5.2	10.3
Energy and Sports Drinks	0.9	0.1	na	4.1	112	3.5	6.9
Fruit Drinks and Ades	5.8	0.8	2.9	24.0	677	3.4	7.3
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	2.7	0.4	1.8	16.1	434	2.6	4.8
Ready-to-Eat Breakfast Cereals	1.4	0.2	0.7	36.7	941	0.6	1.0
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 0.1	na	3.8	94	0.1	0.1
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	2.7	0.4	1.4	34.3	966	1.2	2.9
Granola, Meal Replacement, and Breakfast Bars	0.2	< 0.1	na	9.1	183	0.4	0.6
Pasta and Noodles	2.7	0.4	1.5	28.5	710	1.5	3.2
<u>Hard Candy</u>							
Hard Candy	0.1	< 0.1	na	6.1	160	0.3	0.6

Table B-5 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Female Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	5.3	0.8	2.8	36.1	1,027	2.2	4.5
Processed Fruits	1.0	0.2	0.4	18.2	412	0.8	1.9
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.4	0.1	na	3.2	79	2.0	3.9
<u>Snack Foods</u>							
Salty Snacks	1.0	0.1	0.5	33.0	821	0.5	1.0
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.6	0.1	0.3	24.9	588	0.3	0.7
Soft Candy	0.2	< 0.1	< 0.1	11.5	279	0.3	0.8
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.5	0.2	0.9	18.0	537	1.2	2.3

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

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Table B-6 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	17.5	31.9	100.0	2,387	17.5	31.9
<u>Alcoholic beverages</u>							
Distilled Liquors	0.7	0.1	0.2	11.4	232	1.1	2.5
Malted Beverages	14.4	2.6	8.6	31.1	655	8.3	17.1
Wine	0.9	0.2	0.1	10.7	216	1.6	3.7
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	< 0.1	na	6.8	142	0.6	1.2
Breads and Rolls	7.1	1.2	2.6	90.5	2,127	1.4	2.7
Cakes and Cupcakes	0.6	0.1	0.3	12.4	271	0.8	1.7
Cookies and Brownies	0.7	0.1	0.5	30.1	762	0.4	0.9
Cornbread and Tortillas	1.5	0.3	0.9	26.6	754	1.1	2.4
Crackers	0.3	0.1	0.2	20.3	451	0.3	0.6
Muffins and English Muffins	0.3	0.1	na	6.4	144	0.8	1.6
Pancakes and Waffles	0.4	0.1	na	8.6	189	0.9	1.5
Pastries	1.4	0.2	0.9	22.0	498	1.1	2.2
<u>Beverages and Beverage Bases</u>							
Bottled Water	23.5	4.0	13.8	44.6	1,101	9.0	19.8
Carbonated Fruit Drinks	6.0	1.1	3.3	22.6	549	4.7	11.0
Carbonated Soft Drinks	16.7	2.9	8.1	53.4	1,238	5.3	11.2
Energy and Sports Drinks	2.7	0.5	1.6	10.8	219	4.3	8.6
Fruit Drinks and Ades	5.3	0.9	3.2	24.1	585	3.8	7.7
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.7	0.3	1.0	11.5	305	2.7	4.7
Ready-to-Eat Breakfast Cereals	1.2	0.2	0.7	34.3	774	0.6	1.2
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 0.1	na	2.9	63	0.1	0.2
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.0	0.6	1.9	34.5	855	1.7	3.9
Granola, Meal Replacement, and Breakfast Bars	0.2	< 0.1	na	7.7	145	0.4	0.7
Pasta and Noodles	2.4	0.4	1.5	27.8	605	1.5	3.2
<u>Hard Candy</u>							
Hard Candy	0.1	< 0.1	na	5.4	136	0.3	0.5

Table B-6 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by Male Adults Aged 20 Years and Over Within the U.S. (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	4.7	0.9	2.8	36.8	895	2.3	4.6
Processed Fruits	0.7	0.1	0.3	13.7	315	0.9	2.3
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.5	0.1	na	4.1	80	2.0	3.4
<u>Snack Foods</u>							
Salty Snacks	1.0	0.2	0.5	34.1	688	0.5	1.1
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.4	0.1	0.3	20.4	459	0.3	0.7
Soft Candy	0.1	< 0.1	na	7.2	165	0.3	0.6
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.2	0.2	0.9	16.7	422	1.4	2.7

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

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Table B-7 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by the Total US Population (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
All	100	18.4	35.3	99.1	8,223	18.6	35.3
<u>Alcoholic beverages</u>							
Distilled Liquors	0.5	0.1	na	6.4	400	1.1	2.4
Malted Beverages	7.8	1.1	3.1	14.6	896	7.7	16.3
Wine	1.1	0.2	na	9.0	497	2.0	4.2
<u>Baked Goods and Baking Mixes</u>							
Biscuits	0.2	< 0.1	na	6.1	457	0.7	1.5
Breads and Rolls	7.2	1.4	3.0	88.1	7,090	1.5	3.2
Cakes and Cupcakes	0.6	0.1	0.3	12.2	895	0.9	1.9
Cookies and Brownies	0.9	0.2	0.6	32.0	2,754	0.6	1.3
Cornbread and Tortillas	1.5	0.3	0.9	27.0	2,687	1.1	2.4
Crackers	0.5	0.1	0.4	26.9	2,224	0.5	1.1
Muffins and English Muffins	0.4	0.1	na	7.0	465	1.0	1.8
Pancakes and Waffles	0.7	0.2	0.5	11.9	1,036	1.4	2.7
Pastries	1.4	0.3	1.0	19.8	1,517	1.3	2.6
<u>Beverages and Beverage Bases</u>							
Bottled Water	26.4	4.5	14.3	47.6	4,125	9.6	20.8
Carbonated Fruit Drinks	6.2	1.1	3.6	21.8	1,901	4.9	10.4
Carbonated Soft Drinks	15.7	2.4	7.3	45.8	3,426	5.3	10.8
Energy and Sports Drinks	2.2	0.4	na	8.2	629	4.7	9.3
Fruit Drinks and Ades	6.6	1.5	4.7	28.7	2,695	5.1	10.9
<u>Breakfast Cereals</u>							
Instant and Regular Hot Cereals	1.9	0.4	1.2	11.7	963	3.3	6.3
Ready-to-Eat Breakfast Cereals	1.4	0.3	1.0	39.9	3,490	0.8	1.6
<u>Chewing Gum</u>							
Chewing Gum	< 0.1	< 0.1	na	3.7	295	0.1	0.1
<u>Grain Products and Pastas</u>							
Cereal Grains, prepared	3.0	0.6	1.8	33.1	2,918	1.8	4.0
Granola, Meal Replacement, and Breakfast Bars	0.2	< 0.1	na	8.9	603	0.5	1.1
Pasta and Noodles	3.0	0.7	2.1	31.1	2,503	2.2	4.8
<u>Hard Candy</u>							
Hard Candy	0.1	< 0.1	na	7.5	663	0.3	0.8

Table B-7 Estimated Daily Per Kilogram Body Weight Intake of Magnesium L-Threonate from Individual Proposed Food-Uses by the Total US Population (2009-2010 NHANES Data)

Food-Use Category	% Contribution to Total Mean Intake	All-Person Consumption (mg/kg bw/day)		All-Users Consumption (mg/kg bw/day)			
		Mean	90 th Percentile	%	n user	Mean	90 th Percentile
<u>Processed Fruits and Fruit Juices</u>							
Fruit Juice	5.9	1.5	4.3	39.5	3,678	3.8	8.2
Processed Fruits	0.9	0.2	0.5	15.6	1,180	1.5	3.4
<u>Processed Vegetables and Vegetable Juices</u>							
Vegetable Juice	0.4	0.1	na	3.1	211	2.8	4.8
<u>Snack Foods</u>							
Salty Snacks	1.1	0.2	0.7	37.1	2,969	0.6	1.3
<u>Soft Candy</u>							
Chocolate and Candy Bars	0.5	0.1	0.3	21.9	1,614	0.4	0.9
Soft Candy	0.2	0.1	0.1	12.0	1,027	0.5	1.3
<u>Soup and Soup Mixes</u>							
Non-Cream Soups	1.4	0.3	1.1	16.9	1,622	1.7	3.5

na = not available

* Indicates an intake estimate that may not be statistically reliable, as the sample size does not meet the minimum reporting requirements.

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APPENDIX C

**Representative NHANES Food Codes for Proposed Food-Uses of Magnesium
L-Threonate in the U.S. (2009-2010 NHANES Data)**

Representative 2009-2010 NHANES Food Codes for Proposed Food-Uses of Magnesium L-Threonate in the U.S.

Alcoholic Beverages

Distilled Liquors

[Magnesium L-Threonate] = 0.0885%

93201000	Cordial or liqueur
93302100	Zombie
93501000	Brandy
93502000	Whiskey
93503000	Gin
93504000	Rum
93505000	Vodka

Mixed Foods Containing Distilled Liquors

Adjusted for distilled liquors content of 50 to 75%

[Magnesium L-Threonate] = 0.04425 to 0.06638%

93301085	Kamikaze
93301110	Martini
93301120	Mint julep
93301130	Old fashioned
93301240	Black Russian
93301250	White Russian
93301270	Fruit punch, alcoholic
93301280	Singapore Sling
93301290	Stinger
93301310	Mai Tai
93301320	Tequila Sunrise
93301360	Long Island iced tea
93301450	Liqueur with cream

Mixed Foods Containing Distilled Liquors

Adjusted for distilled liquors content of up to 50%

[Magnesium L-Threonate] = up to 0.04425%

93301000	Cocktail, NFS
93301010	Alexander
93301020	Bacardi cocktail
93301030	Bloody Mary
93301031	Canadian Club and soda
93301032	Cape Cod
93301040	Daiquiri
93301050	Gimlet
93301060	Gin and Tonic
93301070	Grasshopper
93301080	High ball
93301090	Manhattan
93301100	Margarita
93301115	Mimosa
93301135	Rob Roy
93301136	Rusty Nail

93301139	Salty Dog
93301140	Screwdriver
93301141	Seabreeze
93301142	Seven and Seven
93301150	Tom Collins
93301160	Whiskey sour
93301170	Bourbon and soda
93301180	Mixed Drinks (for recipe modifications)
93301190	Rum and cola
93301200	Pina Colada
93301220	Coquito, Puerto Rican (coconut, rum)
93301230	Sloe gin fizz
93301300	Gibson
93301330	Gin Rickey
93301340	Golden Cadillac
93301370	Fuzzy Navel
93301400	Irish Coffee
93301500	Frozen daiquiri
93301510	Frozen margarita
93301550	Eggnog, alcoholic
93301600	Gin fizz
93302000	Rum, hot buttered
93504100	Rum cooler

Malted Beverages

[Magnesium L-Threonate] = 0.0885%

93101000	Beer
93102000	Beer, lite

Wine

[Magnesium L-Threonate] = 0.0885%

93401010	Wine, table, red
93401020	Wine, table, white
93401100	Wine, rice
93401300	Wine, cooking (assume cooked)
93402000	Wine, dessert, sweet
93403000	Wine, light
93404000	Wine cooler
93404500	Sangria
93404600	Sangria, Puerto Rican style
93405000	Wine spritzer
93406000	Glug

Baked Goods and Baking Mixes

Biscuits

[Magnesium L-Threonate] = 0.12%

52101020	Biscuit dough, raw
52101030	Biscuit dough, fried
52101040	Crumpet
52101050	Crumpet, toasted

52101100	Biscuit, baking powder or buttermilk type, made from mix
52101150	Biscuit, baking powder or buttermilk type, made from refrigerated dough, lowfat
52102040	Biscuit, baking powder or buttermilk type, made from refrigerated dough
52103000	Biscuit, baking powder or buttermilk type, commercially baked
52104040	Biscuit, whole wheat
52104100	Biscuit, cheese
52104200	Biscuit, cinnamon-raisin
52105100	Scone
52105110	Scone, whole wheat
52105200	Scone, with fruit

Mixed Foods Containing Biscuits

Adjusted for biscuit content of 90%
[Magnesium L-Threonate] = 0.108%

58128000	Biscuit with gravy
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Breads and Rolls

[Magnesium L-Threonate] = 0.12%

51000100	Bread, NS as to major flour
51000110	Bread, NS as to major flour, toasted
51000200	Roll, NS as to major flour
51000230	Roll, NS as to major flour, toasted
51000300	Roll, hard, NS as to major flour
51000400	Roll, bran, NS as to type of bran
51000410	Roll, bran, NS as to type of bran, toasted
51101000	Bread, white
51101010	Bread, white, toasted
51102010	Bread, white with whole wheat swirl
51102020	Bread, white with whole wheat swirl, toasted
51105010	Bread, Cuban
51105040	Bread, Cuban, toasted
51106010	Bread, Native, water, Puerto Rican style (Pan Criollo)
51106020	Bread, Native, water, Puerto Rican style, toasted (Pan Criollo)
51106200	Bread, lard, Puerto Rican style (Pan de manteca)
51106210	Bread, lard, Puerto Rican style, toasted (Pan de manteca)
51106300	Bread, caressed, Puerto Rican style (Pan sobao)
51106310	Bread, caressed, Puerto Rican style, toasted (Pan sobao)
51107010	Bread, French or Vienna
51107040	Bread, French or Vienna, toasted
51108010	Focaccia, Italian flatbread, plain
51108100	Naan, Indian flatbread
51109010	Bread, Italian, Grecian, Armenian
51109040	Bread, Italian, Grecian, Armenian, toasted
51109100	Bread, pita
51109110	Bread, pita, toasted
51109150	Bread, pita with fruit
51109200	Bread, pita with fruit, toasted
51110010	Bread, batter
51111010	Bread, cheese
51111040	Bread, cheese, toasted
51113010	Bread, cinnamon
51113100	Bread, cinnamon, toasted

51115010	Bread, cornmeal and molasses
51115020	Bread, cornmeal and molasses, toasted
51119010	Bread, egg, Challah
51119040	Bread, egg, Challah, toasted
51119100	Bread, lowfat, 98% fat free
51119110	Bread, lowfat, 98% fat free, toasted
51121010	Bread, garlic
51121040	Bread, garlic, toasted
51121110	Bread, onion
51122000	Bread, reduced calorie and/or high fiber, white or NFS
51122010	Bread, reduced calorie and/or high fiber, white or NFS, toasted
51122050	Bread, reduced calorie and/or high fiber, Italian
51122060	Bread, reduced calorie and/or high fiber, Italian, toasted
51122100	Bread, reduced calorie and/or high fiber, white or NFS, with fruit and/or nuts
51122110	Bread, reduced calorie and/or high fiber, white or NFS, with fruit and/or nuts, toasted
51122300	Bread, white, special formula, added fiber
51122310	Bread, white, special formula, added fiber, toasted
51123010	Bread, high protein
51123020	Bread, high protein, toasted
51126010	Bread, milk and honey
51126020	Bread, milk and honey, toasted
51127010	Bread, potato
51127020	Bread, potato, toasted
51129010	Bread, raisin
51129020	Bread, raisin, toasted
51130510	Bread, white, low sodium or no salt
51130520	Bread, white, low sodium or no salt, toasted
51133010	Bread, sour dough
51133020	Bread, sour dough, toasted
51134000	Bread, sweetpotato
51135000	Bread, vegetable
51135010	Bread, vegetable, toasted
51140100	Bread, dough, fried
51150000	Roll, white, soft
51150100	Roll, white, soft, toasted
51152000	Roll, white, soft, reduced calorie and/or high fiber
51152100	Roll, white, soft, reduced calorie and/or high fiber, toasted
51153000	Roll, white, hard
51153010	Roll, white, hard, toasted
51154510	Roll, diet
51154550	Roll, egg bread
51154560	Roll, egg bread, toasted
51154600	Roll, cheese
51155000	Roll, French or Vienna
51155010	Roll, French or Vienna, toasted
51156500	Roll, garlic
51157000	Roll, hoagie, submarine
51157010	Roll, hoagie, submarine, toasted
51158100	Roll, Mexican, bolillo
51159000	Roll, sour dough
51160000	Roll, sweet
51160010	Roll, sweet, toasted
51160100	Roll, sweet, cinnamon bun, no frosting
51160110	Roll, sweet, cinnamon bun, frosted

51161000	Roll, sweet, with fruit, no frosting
51161020	Roll, sweet, with fruit, frosted
51161030	Roll, sweet, with fruit, frosted, diet
51161050	Roll, sweet, with nuts, frosted
51161070	Roll, sweet, with fruit, frosted, fat free
51161100	Roll, sweet, with fruit and nuts, no frosting
51161150	Roll, sweet, with fruit and nuts, frosted
51161200	Roll, sweet, with nuts, no frosting
51161250	Roll, sweet, no topping, Mexican (Pan Dulce)
51161270	Roll, sweet, sugar topping, Mexican (Pan Dulce)
51161280	Roll, sweet, with raisins and icing, Mexican (Pan Dulce)
51166000	Croissant
51166100	Croissant, cheese
51166200	Croissant, chocolate
51166500	Croissant, fruit
51166700	Croissant, nut
51167000	Brioche
51168000	Bread, Spanish coffee
51180010	Bagel
51180020	Bagel, toasted
51180030	Bagel, with raisins
51180040	Bagel, with raisins, toasted
51180080	Bagel, with fruit other than raisins
51180090	Bagel, with fruit other than raisins, toasted
51182010	Bread stuffing
51182020	Bread stuffing made with egg
51184000	Bread sticks, hard
51184010	Bread stick, soft
51184020	Bread stick, NS as to hard or soft
51184030	Bread stick, soft, prepared with garlic and parmesan cheese
51184100	Bread stick, hard, low sodium
51185000	Croutons
51187000	Melba toast
51187020	Anisette toast
51188100	Pannetone (Italian-style sweet bread)
51188500	Zwieback toast
51201010	Bread, whole wheat, 100%
51201020	Bread, whole wheat, 100%, toasted
51201110	Bread, whole wheat, 100%, with raisins
51201120	Bread, whole wheat, 100%, with raisins, toasted
51201150	Bread, pita, whole wheat, 100%
51201160	Bread, pita, whole wheat, 100%, toasted
51204010	Bread, wheat germ
51204020	Bread, wheat germ, toasted
51207010	Bread, sprouted wheat
51207020	Bread, sprouted wheat, toasted
51208000	Bagel, whole wheat, 100%
51208010	Bagel, whole wheat, 100%, toasted
51208100	Bagel, whole wheat, 100%, with raisins
51208110	Bagel, whole wheat, 100%, with raisins, toasted
51220000	Roll, whole wheat, 100%
51220010	Roll, whole wheat, 100%, toasted
51300050	Bread, whole grain white
51300060	Bread, whole grain white, toasted

51300110	Bread, whole wheat, NS as to 100%
51300120	Bread, whole wheat, NS as to 100%, toasted
51300180	Bread, puri or poori (Indian puffed bread), wheat
51300210	Bread, whole wheat, NS as to 100%, with raisins
51300220	Bread, whole wheat, NS as to 100%, with raisins, toasted
51301010	Bread, wheat or cracked wheat
51301020	Bread, wheat or cracked wheat, toasted
51301120	Bread, wheat or cracked wheat, with raisins
51301130	Bread, wheat or cracked wheat, with raisins, toasted
51301510	Bread, wheat or cracked wheat, reduced calorie and/or high fiber
51301520	Bread, wheat or cracked wheat, reduced calorie and/or high fiber, toasted
51301600	Bread, pita, whole wheat, NS as to 100%
51301610	Bread, pita, whole wheat, NS as to 100%, toasted
51301620	Bread, pita, wheat or cracked wheat
51301630	Bread, pita, wheat or cracked wheat, toasted
51301700	Bagel, wheat
51301710	Bagel, wheat, toasted
51301750	Bagel, whole wheat, NS as to 100%
51301760	Bagel, whole wheat, NS as to 100%, toasted
51301800	Bagel, wheat, with raisins
51301810	Bagel, wheat, with raisins, toasted
51301820	Bagel, wheat, with fruit and nuts
51301830	Bagel, wheat, with fruit and nuts, toasted
51301900	Bagel, wheat bran
51301910	Bagel, wheat bran, toasted
51302010	Bread, wheat bran
51302020	Bread, wheat bran, toasted
51302050	Bread, wheat bran, with raisins
51302060	Bread, wheat bran, with raisins, toasted
51306000	Bread stick, hard, whole wheat, NS as to 100%
51320010	Roll, wheat or cracked wheat
51320020	Roll, wheat or cracked wheat, toasted
51320500	Roll, whole wheat, NS as to 100%
51320510	Roll, whole wheat, NS as to 100%, toasted
51401010	Bread, rye
51401020	Bread, rye, toasted
51401030	Bread, marble rye and pumpernickel
51401040	Bread, marble rye and pumpernickel, toasted
51401060	Bread, rye, reduced calorie and/or high fiber
51401070	Bread, rye, reduced calorie and/or high fiber, toasted
51404010	Bread, pumpernickel
51404020	Bread, pumpernickel, toasted
51404500	Bagel, pumpernickel
51404510	Bagel, pumpernickel, toasted
51407010	Bread, black
51407020	Bread, black, toasted
51420000	Roll, rye
51421000	Roll, pumpernickel
51421100	Roll, pumpernickel, toasted
51501010	Bread, oatmeal
51501020	Bread, oatmeal, toasted
51501040	Bread, oat bran
51501050	Bread, oat bran, toasted
51501060	Bread, oat bran, reduced calorie and/or high fiber

51501070	Bread, oat bran, reduced calorie and/or high fiber, toasted
51501080	Bagel, oat bran
51501090	Bagel, oat bran, toasted
51502010	Roll, oatmeal
51502020	Roll, oatmeal, toasted
51502100	Roll, oat bran
51502110	Roll, oat bran, toasted
51601010	Bread, multigrain, toasted
51601020	Bread, multigrain
51601210	Bread, multigrain, with raisins
51601220	Bread, multigrain, with raisins, toasted
51602010	Bread, multigrain, reduced calorie and/or high fiber
51602020	Bread, multigrain, reduced calorie and/or high fiber, toasted
51620000	Roll, multigrain
51620010	Roll, multigrain, toasted
51630000	Bagel, multigrain
51630010	Bagel, multigrain, toasted
51630100	Bagel, multigrain, with raisins
51630110	Bagel, multigrain, with raisins, toasted
51801010	Bread, barley
51802010	Bread, tritcale
51802020	Bread, tritcale, toasted
51803010	Bread, buckwheat
51803020	Bread, buckwheat, toasted
51804010	Bread, soy
51804020	Bread, soy, toasted
51805010	Bread, sunflower meal
51805020	Bread, sunflower meal, toasted
51806010	Bread, rice
51806020	Bread, rice, toasted
51807000	Injera (American-style Ethiopian bread)
51808000	Bread, low gluten
51808010	Bread, low gluten, toasted
52401000	Bread, Boston Brown
52403000	Bread, nut
52404060	Bread, pumpkin
52405010	Bread, fruit, without nuts
52405100	Bread, fruit and nut
52406010	Bread, whole wheat, with nuts
52407000	Bread, zucchini
52408000	Bread, Irish soda
58112110	Dim sum, meat filled (egg roll-type)
58112510	Dumpling, steamed, filled with meat, poultry, or seafood
58123110	Sweet bread dough, filled with meat, steamed
58123120	Sweet bread dough, filled with bean paste, meatless, steamed

Mixed Foods Containing Breads and Rolls

Adjusted for breads and rolls content of 50 to 70%

[Magnesium L-Threonate] = 0.06 to 0.084%

58106205	Pizza, cheese, prepared from frozen, thick crust
58106210	Pizza, cheese, NS as to type of crust
58106225	Pizza, cheese, regular crust
58106230	Pizza, cheese, thick crust

58106240	Pizza, extra cheese, NS as to type of crust
58106255	Pizza, extra cheese, regular crust
58106260	Pizza, extra cheese, thick crust
58106305	Pizza, cheese with vegetables, prepared from frozen, thick crust
58106310	Pizza, cheese, with vegetables, NS as to type of crust
58106325	Pizza, cheese, with vegetables, regular crust
58106330	Pizza, cheese, with vegetables, thick crust
58106340	Pizza, with cheese and extra vegetables, NS as to type of crust
58106347	Pizza with cheese and extra vegetables, regular crust
58106350	Pizza with cheese and extra vegetables, thick crust
58106357	Pizza, cheese, with fruit, NS as to type of crust
58106359	Pizza, cheese, with fruit, regular crust
58106360	Pizza, cheese, with fruit, thick crust
58106410	Pizza with chicken, NS as to type of crust
58106412	Pizza with chicken, regular crust
58106413	Pizza with chicken, thick crust
58106440	Pizza with chicken and vegetables, NS as to type of crust
58106442	Pizza with chicken and vegetables, regular crust
58106443	Pizza with chicken and vegetables, thick crust
58106460	Pizza with chicken and fruit, NS as to type of crust
58106462	Pizza with chicken and fruit, regular crust
58106463	Pizza with chicken and fruit, thick crust
58106505	Pizza with meat, prepared from frozen, thick crust
58106540	Pizza with pepperoni, NS as to type of crust
58106555	Pizza with pepperoni, regular crust
58106560	Pizza with pepperoni, thick crust
58106610	Pizza with meat other than pepperoni, NS as to type of crust
58106625	Pizza with meat other than pepperoni, regular crust
58106630	Pizza with meat other than pepperoni, thick crust
58106640	Pizza with extra meat, NS as to type of crust
58106655	Pizza with extra meat, regular crust
58106660	Pizza with extra meat, thick crust
58106705	Pizza with meat and vegetables, prepared from frozen, thick crust
58106710	Pizza with meat and vegetables, NS as to type of crust
58106725	Pizza with meat and vegetables, regular crust
58106730	Pizza with meat and vegetables, thick crust
58106734	Pizza with extra meat and extra vegetables, prepared from frozen, thick crust
58106735	Pizza with extra meat and extra vegetables, NS as to type of crust
58106737	Pizza with extra meat and extra vegetables, thick crust
58106738	Pizza with extra meat and extra vegetables, regular crust
58106740	Pizza with meat and fruit, NS as to type of crust
58106755	Pizza with meat and fruit, regular crust
58106760	Pizza with meat and fruit, thick crust
58106780	Pizza with meat and vegetables, prepared from frozen, lowfat, thin crust
58106810	Pizza with beans and vegetables, NS as to type of crust
58106825	Pizza with beans and vegetables, regular crust
58106830	Pizza with beans and vegetables, thick crust
58106900	Pizza with seafood, NS as to type of crust
58106915	Pizza with seafood, regular crust
58106920	Pizza with seafood, thick crust
58107030	Pizza, no cheese, NS as to type of crust
58107060	Pizza, no cheese, regular crust
58107100	Pizza, no cheese, thick crust
58107210	White pizza, NS as to type of crust

58107225	White pizza, regular crust
58107230	White pizza, thick crust
58108000	Calzone, with cheese, meatless
58108010	Calzone, with meat and cheese
58108030	Panzerotti, with meat, vegetables, and cheese
58108040	Panzerotti, with vegetables and cheese
58108050	Pizza rolls
58310210	Sausage and french toast (frozen meal)
58310310	Pancakes and sausage (frozen meal)
58310410	Sausage rice links and whole wheat pancakes (frozen meal)

Mixed Foods Containing Breads and Rolls

Adjusted for breads and rolls content of 20 to 40%

[Magnesium L-Threonate] = 0.024 to 0.048%

27500050	Sandwich, NFS
27500100	Meat sandwich, NFS
27500200	Wrap sandwich, filled with meat, poultry, or fish, vegetables, and cheese
27500300	Wrap sandwich, filled with meat, poultry, or fish, and vegetables
27510000	Beef sandwich, NFS
27510110	Beef barbecue sandwich or Sloppy Joe, on bun
27510130	Beef barbecue submarine sandwich, on bun
27510210	Cheeseburger, plain, on bun
27510220	Cheeseburger, with mayonnaise or salad dressing, on bun
27510230	Cheeseburger, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510240	Cheeseburger, 1/4 lb meat, plain, on bun
27510250	Cheeseburger, 1/4 lb meat, with mayonnaise or salad dressing, on bun
27510260	Cheeseburger, 1/4 lb meat, with mushrooms in sauce, on bun
27510270	Double cheeseburger (2 patties), plain, on bun
27510280	Double cheeseburger (2 patties), with mayonnaise or salad dressing, on bun
27510290	Double cheeseburger (2 patties), plain, on double-decker bun
27510300	Double cheeseburger (2 patties), with mayonnaise or salad dressing, on double-decker bun
27510310	Cheeseburger with tomato and/or catsup, on bun
27510311	Cheeseburger, 1 oz meat, plain, on miniature bun
27510320	Cheeseburger, 1/4 lb meat, with tomato and/or catsup, on bun
27510330	Double cheeseburger (2 patties), with tomato and/or catsup, on bun
27510340	Double cheeseburger (2 patties), with mayonnaise or salad dressing and tomatoes, on bun
27510350	Cheeseburger, 1/4 lb meat, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510355	Cheeseburger, 1/3 lb meat, with mayonnaise or salad dressing, tomato and/or catsup on bun
27510360	Bacon cheeseburger, with mayonnaise or salad dressing, tomato and/or catsup, on bun
27510370	Double cheeseburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing, on bun
27510375	Double cheeseburger (2 patties, 1/4 lb meat each), with tomato and/or catsup, on bun
27510380	Triple cheeseburger (3 patties, 1/4 lb meat each), with mayonnaise or salad dressing and tomatoes, on bun
27510390	Double bacon cheeseburger (2 patties, 1/4 lb meat each), on bun
27510400	Bacon cheeseburger, 1/4 lb meat, with tomato and/or catsup, on bun
27510410	Chiliburger, on bun
27510420	Taco burger, on bun

27510425	Double bacon cheeseburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing, on bun
27510430	Double bacon cheeseburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510435	Double bacon cheeseburger (2 patties, 1/3 lb meat each), with mayonnaise or salad dressing, on bun
27510440	Bacon cheeseburger, 1/4 lb meat, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510450	Cheeseburger, 1/4 lb meat, with ham, on bun
27510480	Cheeseburger (hamburger with cheese sauce), 1/4 lb meat, with grilled onions, on rye bun
27510500	Hamburger, plain, on bun
27510510	Hamburger, with tomato and/or catsup, on bun
27510520	Hamburger, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510530	Hamburger, 1/4 lb meat, plain, on bun
27510540	Double hamburger (2 patties), with tomato and/or catsup, on bun
27510550	Double hamburger (2 patties), with mayonnaise or salad dressing and tomatoes, on double-decker bun
27510560	Hamburger, 1/4 lb meat, with mayonnaise or salad dressing, and tomato and/or catsup, on bun
27510570	Hamburger, 2-1/2 oz meat, with mayonnaise or salad dressing and tomatoes, on bun
27510590	Hamburger, with mayonnaise or salad dressing, on bun
27510600	Hamburger, 1 oz meat, plain, on miniature bun
27510610	Hamburger, 1 oz meat, with tomato and/or catsup, on miniature bun
27510620	Hamburger, 1/4 lb meat, with tomato and/or catsup, on bun
27510630	Hamburger, 1/4 lb meat, with mayonnaise or salad dressing, on bun
27510650	Double hamburger (2 patties), plain, on bun
27510660	Double hamburger (2 patties), with mayonnaise or salad dressing, on bun
27510670	Double hamburger (2 patties), with mayonnaise or salad dressing and tomatoes, on bun
27510680	Double hamburger (2 patties, 1/4 lb meat each), with tomato and/or catsup, on bun
27510690	Double hamburger (2 patties, 1/4 lb meat each), with mayonnaise or salad dressing and tomatoes and/or catsup, on double-decker bun
27510700	Meatball and spaghetti sauce submarine sandwich
27510710	Pizzaburger (hamburger, cheese, sauce) on 1/2 bun
27510720	Pizzaburger (hamburger, cheese, sauce) on whole bun
27510910	Corned beef sandwich
27510950	Reuben sandwich (corned beef sandwich with sauerkraut and cheese), with spread
27511010	Pastrami sandwich
27513010	Roast beef sandwich
27513020	Roast beef sandwich, with gravy
27513030	Roast beef sandwich dipped in egg, fried, with gravy and spread
27513040	Roast beef submarine sandwich, with lettuce, tomato and spread
27513041	Roast beef submarine sandwich, with cheese, lettuce, tomato and spread
27513050	Roast beef sandwich with cheese
27513060	Roast beef sandwich with bacon and cheese sauce
27513070	Roast beef submarine sandwich, on roll, au jus
27515000	Steak submarine sandwich with lettuce and tomato
27515010	Steak sandwich, plain, on roll
27515020	Steak and cheese submarine sandwich, with lettuce and tomato
27515030	Steak and cheese sandwich, plain, on roll
27515040	Steak and cheese submarine sandwich, plain, on roll
27515050	Fajita-style beef sandwich with cheese, on pita bread, with lettuce and tomato
27515070	Steak and cheese submarine sandwich, with fried peppers and onions, on roll
27515080	Steak sandwich, plain, on biscuit

27516010	Gyro sandwich (pita bread, beef, lamb, onion, condiments), with tomato and spread
27520110	Bacon sandwich, with spread
27520120	Bacon and cheese sandwich, with spread
27520130	Bacon, chicken, and tomato club sandwich, with lettuce and spread
27520135	Bacon, chicken, and tomato club sandwich, with cheese, lettuce and spread
27520140	Bacon and egg sandwich
27520150	Bacon, lettuce, and tomato sandwich with spread
27520160	Bacon, chicken, and tomato club sandwich, on multigrain roll with lettuce and spread
27520165	Bacon, chicken fillet (breaded, fried), and tomato club with lettuce and spread
27520166	Bacon, chicken fillet (breaded, fried), and tomato club sandwich with cheese, lettuce and spread
27520170	Bacon on biscuit
27520250	Ham on biscuit
27520300	Ham sandwich, with spread
27520310	Ham sandwich with lettuce and spread
27520320	Ham and cheese sandwich, with lettuce and spread
27520330	Ham and egg sandwich
27520340	Ham salad sandwich
27520350	Ham and cheese sandwich, with spread, grilled
27520360	Ham and cheese sandwich, on bun, with lettuce and spread
27520370	Hot ham and cheese sandwich, on bun
27520380	Ham and cheese on English muffin
27520390	Ham and cheese submarine sandwich, with lettuce, tomato and spread
27520410	Cuban sandwich, (Sandwich cubano), with spread
27520420	Midnight sandwich, (Media noche), with spread
27520500	Pork sandwich, on white roll, with onions, dill pickles and barbecue sauce
27520510	Pork barbecue sandwich or Sloppy Joe, on bun
27520520	Pork sandwich
27520530	Pork sandwich, with gravy
27520540	Ham and tomato club sandwich, with lettuce and spread
27540110	Chicken sandwich, with spread
27540111	Chicken sandwich, with cheese and spread
27540120	Chicken salad or chicken spread sandwich
27540130	Chicken barbecue sandwich
27540140	Chicken fillet (breaded, fried) sandwich
27540145	Chicken fillet (breaded, fried) sandwich on biscuit
27540150	Chicken fillet (breaded, fried) sandwich with lettuce, tomato and spread
27540151	Chicken fillet (breaded, fried) sandwich with cheese, lettuce, tomato and spread
27540170	Chicken patty sandwich, miniature, with spread
27540180	Chicken patty sandwich or biscuit
27540190	Chicken patty sandwich, with lettuce and spread
27540200	Fajita-style chicken sandwich with cheese, on pita bread, with lettuce and tomato
27540210	Wrap sandwich filled with chicken strips (breaded, fried), cheese, lettuce, and spread
27540230	Chicken patty sandwich with cheese, on wheat bun, with lettuce, tomato and spread
27540235	Chicken fillet, broiled, sandwich with lettuce, tomato, and spread
27540240	Chicken fillet, (broiled), sandwich, on whole wheat roll, with lettuce, tomato and spread
27540250	Chicken fillet, broiled, sandwich with cheese, on whole wheat roll, with lettuce, tomato and non-mayonnaise type spread
27540260	Chicken fillet, broiled, sandwich, on oat bran bun, with lettuce, tomato, spread
27540270	Chicken fillet, broiled, sandwich, with lettuce, tomato, and non-mayonnaise type spread
27540280	Chicken fillet, broiled, sandwich with cheese, on bun, with lettuce, tomato and spread
27540290	Chicken submarine sandwich, with lettuce, tomato, and spread
27540291	Chicken submarine sandwich, with cheese, lettuce, tomato, and spread
27540300	Wrap sandwich filled with chicken strips (broiled), cheese, lettuce, and spread

27540310	Turkey sandwich, with spread
27540320	Turkey salad or turkey spread sandwich
27540330	Turkey sandwich, with gravy
27540350	Turkey submarine sandwich, with cheese, lettuce, tomato and spread
27541000	Turkey, ham, and roast beef club sandwich, with lettuce, tomato and spread
27541001	Turkey, ham, and roast beef club sandwich with cheese, lettuce, tomato, and spread
27550000	Fish sandwich, on bun, with spread
27550100	Fish sandwich, on bun, with cheese and spread
27550110	Crab cake sandwich, on bun
27550510	Sardine sandwich, with lettuce and spread
27550710	Tuna salad sandwich, with lettuce
27550720	Tuna salad sandwich
27550730	Tuna melt sandwich
27550750	Tuna salad submarine sandwich, with lettuce and tomato
27550751	Tuna salad submarine sandwich, with cheese, lettuce and tomato
27560000	Luncheon meat sandwich, NFS, with spread
27560110	Bologna sandwich, with spread
27560120	Bologna and cheese sandwich, with spread
27560300	Corn dog (frankfurter or hot dog with cornbread coating)
27560310	Corny dog, with chili, on bun
27560320	Frankfurter or hot dog, plain, on bun
27560330	Frankfurter or hot dog, with cheese, plain, on bun
27560340	Frankfurter or hot dog, with catsup and/or mustard, on bun
27560350	Pig in a blanket (frankfurter or hot dog wrapped in dough)
27560360	Frankfurter or hot dog, with chili, on bun
27560370	Frankfurter or hot dog with chili and cheese, on bun
27560380	Pochito (frankfurter or hot dog and beef chili wrapped in tortilla)
27560400	Chicken frankfurter or hot dog, plain, on bun
27560410	Puerto Rican sandwich (Sandwich criollo)
27560510	Salami sandwich, with spread
27560650	Sausage on biscuit
27560660	Sausage griddle cake sandwich
27560670	Sausage and cheese on English muffin
27560700	Sausage on biscuit, diet
27560705	Sausage balls (made with biscuit mix and cheese)
27560710	Sausage sandwich
27560720	Sausage and spaghetti sauce sandwich
27560910	Cold cut submarine sandwich, with cheese, lettuce, tomato, and spread
27563010	Meat spread or potted meat sandwich
27570310	Hors d'oeuvres, with spread
58106200	Pizza, cheese, prepared from frozen, thin crust
58106220	Pizza, cheese, thin crust
58106250	Pizza, extra cheese, thin crust
58106300	Pizza, cheese, with vegetables, prepared from frozen, thin crust
58106320	Pizza, cheese, with vegetables, thin crust
58106345	Pizza with cheese and extra vegetables, thin crust
58106358	Pizza, cheese, with fruit, thin crust
58106411	Pizza with chicken, thin crust
58106441	Pizza with chicken and vegetables, thin crust
58106461	Pizza with chicken and fruit, thin crust
58106500	Pizza with meat, prepared from frozen, thin crust
58106550	Pizza with pepperoni, thin crust
58106620	Pizza with meat other than pepperoni, thin crust
58106650	Pizza with extra meat, thin crust

58106700	Pizza with meat and vegetables, prepared from frozen, thin crust
58106720	Pizza with meat and vegetables, thin crust
58106733	Pizza with extra meat and extra vegetables, prepared from frozen, thin crust
58106736	Pizza with extra meat and extra vegetables, thin crust
58106750	Pizza with meat and fruit, thin crust
58106820	Pizza with beans and vegetables, thin crust
58106910	Pizza with seafood, thin crust
58107050	Pizza, no cheese, thin crust
58107220	White pizza, thin crust
58127200	Croissant sandwich, filled with broccoli and cheese
58127210	Croissant sandwich, filled with ham and cheese
58127220	Croissant sandwich, filled with chicken, broccoli, and cheese sauce
58127270	Croissant sandwich with sausage and egg
58127290	Croissant sandwich with bacon and egg
58127310	Croissant sandwich with ham, egg, and cheese
58127330	Croissant sandwich with sausage, egg, and cheese
58127350	Croissant sandwich with bacon, egg, and cheese
58128210	Dressing with oysters
58128220	Dressing with chicken or turkey and vegetables
58128250	Dressing with meat and vegetables
58200100	Wrap sandwich, filled with meat, poultry, or fish, vegetables, and rice
58200200	Wrap sandwich, filled with vegetables and rice
58200250	Wrap sandwich, filled with vegetables
58200300	Wrap sandwich, filled with meat, poultry, or fish, vegetables, rice, and cheese

Cakes and Cupcakes

[Magnesium L-Threonate] = 0.12%

51165000	Coffee cake, yeast type
51165100	Coffee cake, yeast type, fat free, cholesterol free, with fruit
53100050	Cake batter, raw, chocolate
53100070	Cake batter, raw, not chocolate
53100100	Cake, NS as to type, with or without icing
53101000	Cake, angel food, NS as to icing
53101100	Cake, angel food, without icing
53101200	Cake, angel food, with icing
53101250	Cake, angel food, with fruit and icing or filling
53101300	Cake, angel food, chocolate, without icing
53102000	Cake, applesauce, NS as to icing
53102100	Cake, applesauce, without icing
53102200	Cake, applesauce, with icing
53102300	Cake, applesauce, diet, without icing
53102500	Cake, banana, NS as to icing
53102600	Cake, banana, without icing
53102700	Cake, banana, with icing
53102800	Cake, black forest (chocolate-cherry)
53103000	Cake, Boston cream pie
53103500	Cake, butter, NS as to icing
53103550	Cake, butter, without icing
53103600	Cake, butter, with icing
53104000	Cake, carrot, NS as to icing
53104100	Cake, carrot, without icing
53104260	Cake, carrot, with icing
53104300	Cake, carrot, diet

53104400	Cake, coconut, with icing
53104500	Cheesecake
53104520	Cheesecake, diet
53104550	Cheesecake with fruit
53104570	Cheesecake, diet, with fruit
53104580	Cheesecake -type dessert, made with yogurt, with fruit
53104600	Cheesecake, chocolate
53104650	Cheesecake, chocolate, reduced fat
53104900	Cake, chocolate, made with mayonnaise or salad dressing, NS as to icing
53104920	Cake, chocolate, made with mayonnaise or salad dressing, without icing or filling
53104950	Cake, chocolate, made with mayonnaise or salad dressing, with icing, coating, or filling
53105000	Cake, chocolate, devil's food, or fudge, standard-type mix (eggs and water added to dry mix), NS as to icing
53105100	Cake, chocolate, devil's food, or fudge, standard-type mix (eggs and water added to dry mix), without icing or filling
53105200	Cake, chocolate, devil's food, or fudge, standard-type mix (eggs and water added to dry mix), with icing, coating, or filling
53105300	Cake, German chocolate, with icing and filling
53105500	Cake, chocolate, with icing, diet
53105600	Cake, chocolate, devil's food, or fudge, pudding-type mix, made by "Lite" recipe (eggs and water added to dry mix, no oil added)
53105650	Cake, chocolate, devil's food, or fudge, pudding type mix, made by "cholesterol free" recipe (water, oil and egg whites added)
53105700	Cake, chocolate, devil's food, or fudge, pudding type mix, made by "cholesterol free" recipe (water, oil and egg whites added)
53105750	Cake, chocolate, devil's food, or fudge, pudding type mix, made by "cholesterol free" recipe (water, oil and egg whites added)
53105900	Cake, chocolate, devil's food, or fudge, pudding-type mix (oil, eggs, and water added to dry mix), NS as to icing
53106000	Cake, chocolate, devil's food, or fudge, pudding-type mix (oil, eggs, and water added to dry mix), without icing or filling
53106050	Cake, chocolate, devil's food, or fudge, pudding-type mix (oil, eggs, and water added to dry mix), with icing, coating, or filling
53106100	Cake, Poor Man's (spice-type), without icing
53106500	Cake, cream, without icing or topping
53107000	Cake, cupcake, NS as to type or icing
53107100	Cake, cupcake, NS as to type, without icing
53107200	Cake, cupcake, NS as to type, with icing
53108000	Cake, cupcake, chocolate, NS as to icing
53108100	Cake, cupcake, chocolate, without icing or filling
53108200	Cake, cupcake, chocolate, with icing or filling
53109000	Cake, cupcake, not chocolate, NS as to icing
53109100	Cake, cupcake, not chocolate, without icing or filling
53109200	Cake, cupcake, not chocolate, with icing or filling
53109210	Cake, cupcake, not chocolate, with icing or filling, lowfat, cholesterol free
53109250	Cake, cupcake, not chocolate, with fruit and cream filling
53109270	Cake, cupcake, chocolate, with or without icing, fruit filling or cream filling, lowfat, cholesterol free
53109300	Cake, Dobos Torte (non-chocolate layer cake with chocolate filling and icing)
53110000	Cake, fruit cake, light or dark, holiday type cake
53110100	Cake, plum pudding
53111000	Cake, gingerbread, without icing
53111500	Cake, graham cracker, without icing
53112000	Cake, ice cream and cake roll, chocolate

53112100	Cake, ice cream and cake roll, not chocolate
53112150	Cake, frozen yogurt and cake layer, not chocolate, with icing
53112160	Cake, frozen yogurt and cake layer, chocolate, with icing
53112500	Cake, ice box with fruit and whipped cream
53113000	Cake, jelly roll
53113950	Cake, lemon, NS as to icing
53114000	Cake, lemon, without icing
53114100	Cake, lemon, with icing
53114150	Cake, lemon, lowfat, NS as to icing
53114200	Cake, lemon, lowfat, without icing
53114250	Cake, lemon, lowfat, with icing
53115000	Cake, marble, NS as to icing
53115100	Cake, marble, without icing
53115200	Cake, marble, with icing
53115300	Cake, nut, NS as to icing
53115310	Cake, nut, without icing
53115320	Cake, nut, with icing
53115400	Cake, oatmeal, without icing
53115410	Cake, oatmeal, with icing
53115450	Cake, peanut butter, with icing
53115500	Cake, pineapple, fat free, cholesterol free, without icing
53115600	Cake, poppyseed, without icing
53116000	Cake, pound, without icing
53116020	Cake, pound, with icing
53116270	Cake, pound, chocolate
53116280	Cake, pound, chocolate, fat free, cholesterol free
53116350	Cake, pound, Puerto Rican style (Ponque)
53116380	Cake, pound, fat free, cholesterol free
53116390	Cake, pound, reduced fat, cholesterol free
53116490	Cake, pumpkin, NS as to icing
53116500	Cake, pumpkin, without icing
53116510	Cake, pumpkin, with icing
53116550	Cake, raisin-nut, without icing
53116560	Cake, raisin-nut, with icing
53116570	Cake, Ravani (made with farina)
53116600	Cake, rice flour, without icing
53116650	Cake, Quezadilla, El Salvadorian style
53116750	Cake, soy flour, without icing
53117000	Cake, spice, NS as to icing
53117100	Cake, spice, without icing
53117200	Cake, spice, with icing
53118000	Cake, sponge, NS as to icing
53118100	Cake, sponge, without icing
53118200	Cake, sponge, with icing
53118300	Cake, sponge, chocolate, without icing
53118310	Cake, sponge, chocolate, with icing
53118350	Cake, sweetpotato, with icing
53118410	Cake, rum flavored, without icing (Sopa Borracha)
53118500	Cake, torte
53118550	Cake, tres leche
53118600	Cake, chiffon, NS as to icing
53118700	Cake, chiffon, without icing
53118800	Cake, chiffon, with icing
53118900	Cake, chiffon, chocolate, without icing

53118950	Cake, chiffon, chocolate, with icing
53119000	Cake, upside down (all fruits)
53120000	Cake, white, standard-type mix (egg whites and water added), NS as to icing
53120100	Cake, white, standard-type mix (egg whites and water added to mix), without icing
53120200	Cake, white, standard-type mix (egg whites and water added to mix), with icing
53120300	Cake, white, pudding-type mix (oil, egg whites, and water added to dry mix), NS as to icing
53120330	Cake, white, pudding-type mix (oil, egg whites, and water added to dry mix), without icing
53120350	Cake, white, pudding-type mix (oil, egg whites, and water added to dry mix), with icing
53120400	Cake, white, eggless, lowfat
53120500	Cake, whole wheat, with fruit and nuts, without icing
53121000	Cake, yellow, standard-type mix (eggs and water added to dry mix), NS as to icing
53121100	Cake, yellow, standard-type mix (eggs and water added to dry mix), without icing
53121200	Cake, yellow, standard-type mix (eggs and water added to dry mix), with icing
53121280	Cake, yellow, pudding-type mix (oil, eggs, and water added to dry mix), NS as to icing
53121300	Cake, yellow, pudding-type mix (oil, eggs, and water added to dry mix), without icing
53121330	Cake, yellow, pudding-type mix (oil, eggs, and water added to dry mix), with icing
53122070	Cake, shortcake, biscuit type, with whipped cream and fruit
53122080	Cake, shortcake, biscuit type, with fruit
53123070	Cake, shortcake, sponge type, with whipped cream and fruit
53123080	Cake, shortcake, sponge type, with fruit
53123500	Cake, shortcake, with whipped topping and fruit, diet
53124100	Cake, zucchini, NS as to icing
53124110	Cake, zucchini, without icing
53124120	Cake, zucchini, with icing
53610000	Coffee cake, NFS
53610100	Coffee cake, crumb or quick-bread type
53610120	Coffee cake, crumb or quick-bread type, reduced fat, cholesterol free
53610170	Coffee cake, crumb or quick-bread type, with fruit
53610200	Coffee cake, crumb or quick-bread type, cheese-filled
53610250	Coffee cake, crumb or quick-bread type, custard filled
55801000	Funnel cake

Cookies and Brownies

[Magnesium L-Threonate] = 0.12%

53200100	Cookie, batter or dough, raw, not chocolate
53201000	Cookie, NFS
53202000	Cookie, almond
53203000	Cookie, applesauce
53203500	Cookie, biscotti (Italian sugar cookie)
53204000	Cookie, brownie, NS as to icing
53204010	Cookie, brownie, without icing
53204100	Cookie, brownie, with icing
53204500	Cookie, brownie, with cream cheese filling, without icing
53204600	Cookie, brownie, with peanut butter fudge icing
53204800	Cookie, brownie, diet, NS as to icing
53204830	Cookie, brownie, lowfat, with icing
53204840	Cookie, brownie, lowfat, without icing
53204850	Cookie, brownie, fat free, cholesterol free, with icing
53204860	Cookie, brownie, fat free, without icing
53205250	Cookie, butterscotch, brownie
53205500	Cookie, butterscotch chip
53205600	Cookie, caramel coated, with nuts

53205750	Cookie, carob
53205760	Cookie, carob and honey brownie
53206000	Cookie, chocolate chip
53206010	Cookie, chocolate chip, with raisins
53206030	Cookie, chocolate chip, reduced fat
53206050	Cookie, rich, chocolate chip, with chocolate filling
53206100	Cookie, chocolate chip sandwich
53206500	Cookie, chocolate, made with rice cereal
53206550	Cookie, chocolate, made with oatmeal and coconut (no-bake)
53207000	Cookie, chocolate fudge, with/without nuts
53207050	Cookie, chocolate, with chocolate filling or coating, fat free
53208000	Cookie, chocolate-covered marshmallow
53208200	Cookie, marshmallow pie, chocolate covered
53209000	Cookie, chocolate, chocolate sandwich or chocolate-coated or striped
53209010	Cookie, chocolate-covered, sugar wafer, creme- or caramel-filled
53209020	Cookie, chocolate sandwich, reduced fat
53209050	Cookie, chocolate-covered, chocolate sandwich
53209100	Cookie, chocolate, sandwich, with extra filling
53209500	Cookie, chocolate and vanilla sandwich
53210000	Cookie, chocolate wafer
53210900	Cookie, graham cracker sandwich with chocolate and marshmallow filling
53210910	Cookie, graham cracker with marshmallow
53211000	Cookie bar, with chocolate, nuts, and graham crackers
53215500	Cookie, coconut
53216000	Cookie, coconut and nut
53220000	Cookie, fruit-filled bar
53220010	Cookie, fruit-filled bar, fat free
53220020	Cookie, date bar
53220030	Cookie, fig bar
53220040	Cookie, fig bar, fat free
53222010	Cookie, fortune
53222020	Cookie, cone shell, ice cream type, wafer or cake
53222100	Cookie, cone shell, ice cream type, brown sugar
53223000	Cookie, gingersnaps
53223100	Cookie, granola
53224000	Cookie, ladyfinger
53224250	Cookie, lemon bar
53225000	Cookie, macaroon, coconut-meringue type, no flour
53226000	Cookie, marshmallow, with coconut
53226500	Cookie, marshmallow, with rice cereal (no-bake)
53226550	Cookie, marshmallow, with rice cereal and chocolate chips
53226600	Cookie, marshmallow and peanut butter, with oat cereal (no-bake)
53227000	Cookie, marshmallow pies, non-chocolate coating
53228000	Cookie, meringue
53230000	Cookie, molasses
53231000	Cookie, Lebkuchen
53231400	Cookie, multigrain, high fiber
53233000	Cookie, oatmeal
53233010	Cookie, oatmeal, with raisins
53233020	Cookie, oatmeal, with fruit filling
53233030	Cookie, oatmeal, fat free, with raisins
53233040	Cookie, oatmeal, reduced fat, with raisins
53233050	Cookie, oatmeal sandwich, with creme filling
53233060	Cookie, oatmeal, with chocolate chips

53233080	Cookie, oatmeal sandwich, with peanut butter and jelly filling
53233100	Cookie, oatmeal, with chocolate and peanut butter (no-bake)
53233500	Cookie, oat bran
53234000	Cookie, peanut butter
53234010	Cookie, peanut butter, with oatmeal
53234100	Cookie, peanut butter, with chocolate
53234250	Cookie, peanut butter with rice cereal (no-bake)
53235000	Cookie, peanut
53235500	Cookie, with peanut butter filling, chocolate-coated
53235600	Cookie, Pfeffernusse
53236000	Cookie, pizzelle (Italian style wafer)
53236100	Cookie, pumpkin
53237000	Cookie, raisin
53237010	Cookie, raisin sandwich, cream-filled
53237500	Cookie, rum ball (no-bake)
53238000	Cookie, sandwich-type, not chocolate or vanilla
53239000	Cookie, shortbread
53239010	Cookie, shortbread, reduced fat
53239050	Cookie, shortbread, with chocolate filling
53241500	Cookie, butter or sugar cookie
53241600	Cookie, butter or sugar cookie, with fruit and/or nuts
53242000	Cookie, sugar wafer
53242500	Cookie, toffee bar
53243000	Cookie, vanilla sandwich
53243050	Cookie, vanilla sandwich, reduced fat
53243100	Cookie, rich, all chocolate, with chocolate filling or chocolate chips
53244010	Cookie, butter or sugar, with chocolate icing or filling
53244020	Cookie, butter or sugar, with icing or filling other than chocolate
53245000	Cookie, vanilla waffle creme
53246000	Cookie, tea, Japanese
53247000	Cookie, vanilla wafer
53247050	Cookie, vanilla wafer, reduced fat
53247500	Cookie, vanilla with caramel, coconut, and chocolate coating
53248000	Cookie, whole wheat, dried fruit, nut
53251100	Cookie, rugelach
53260030	Cookie, dietetic, chocolate chip
53260150	Cookie, lemon wafer, lowfat
53260200	Cookie, dietetic, oatmeal with raisins
53260300	Cookie, dietetic, sandwich type
53260400	Cookie, dietetic, sugar or plain
53270100	Cookies, Puerto Rican (Mantecaditos polvorones)

Cornbread and Tortillas

[Magnesium L-Threonate] = 0.12%

52201000	Cornbread, prepared from mix
52204000	Cornbread stuffing
52206010	Cornbread muffin, stick, round
52207010	Corn flour patty or tart, fried
52208010	Corn pone, baked
52208020	Corn pone, fried
52208750	Gordita/sope shell, plain, no filling, grilled, no fat added
52208760	Gordita/sope shell, plain, no filling, fried in oil
52209010	Hush puppy

52211010	Johnnycake
52213010	Spoonbread
52215000	Tortilla, NFS
52215100	Tortilla, corn
52215200	Tortilla, flour (wheat)
52215260	Tortilla, whole wheat
52215300	Taco shell, corn
52215350	Taco shell, flour
52220110	Cornmeal bread, Dominican style (Arepa Dominicana)
58101910	Taco or tostada salad with beef and cheese, corn chips
58101930	Taco or tostada salad with beef, beans and cheese, fried flour tortilla
58101940	Taco or tostada salad, meatless, with cheese, fried flour tortilla
58103120	Tamale with meat
58103130	Tamale with chicken
58103200	Tamale, plain, meatless, no sauce, Puerto Rican style or Carribean Style
58103210	Tamale, meatless, with sauce, Puerto Rican or Caribbean style
58103250	Tamale, plain, meatless, no sauce, Mexican style
58103310	Tamale casserole with meat
58117110	Cornmeal fritter, Puerto Rican style (Arepa; P.R. arepita)
58117210	Cornmeal stick, Puerto Rican style (Sorulllos / Sorullitos de maiz)
58128110	Chicken cornbread
58306010	Beef enchilada dinner, NFS (frozen meal)
58306020	Beef enchilada, chili gravy, rice, refried beans (frozen meal)
58306070	Cheese enchilada (frozen meal)
58306100	Chicken enchilada (diet frozen meal)
58306150	Chicken enchilada with salsa, rice, vegetable, and dessert (diet frozen meal)
58306200	Chicken fajitas (diet frozen meal)
58306500	Chicken burritos (diet frozen meal)

Mixed Foods containing Cornbread and Tortillas

Adjusted for cornbread and tortilla content of up to 40%

[Magnesium L-Threonate] = up to 0.048%

58100100	Burrito with beef, no beans
58100110	Burrito with beef and beans
58100120	Burrito with beef, beans, and cheese
58100130	Burrito with beef and cheese, no beans
58100140	Burrito with beef, beans, cheese, and sour cream
58100150	Burrito with beef and potato, no beans
58100155	Burrito with beef, rice, and cheese
58100160	Burrito with beef, beans, rice, and cheese
58100180	Burrito with pork and beans
58100200	Burrito with chicken, no beans
58100210	Burrito with chicken and beans
58100220	Burrito with chicken, beans, and cheese
58100230	Burrito with chicken and cheese
58100240	Burrito with chicken, NFS
58100245	Burrito with chicken, beans, cheese, and sour cream
58100250	Burrito with chicken, rice, and cheese
58100255	Burrito with chicken, beans, rice, and cheese
58100300	Burrito with beans and rice, meatless
58100310	Burrito with beans, meatless
58100320	Burrito with beans and cheese, meatless
58100330	Burrito with rice, beans, cheese, sour cream, lettuce, tomato and guacamole, meatless

58100340	Burrito with eggs, sausage, cheese and vegetables
58100350	Burrito with eggs and cheese, no beans
58100360	Chilaquiles, tortilla casserole with salsa, cheese, and egg
58100370	Chilaquiles, tortilla casserole with salsa and cheese, no egg
58100400	Enchilada with beef, no beans
58100410	Burrito with beef, cheese, and sour cream
58100510	Enchilada with beef and beans
58100520	Enchilada with beef, beans, and cheese
58100530	Enchilada with beef and cheese, no beans
58100560	Enchilada with ham and cheese, no beans
58100600	Enchilada with chicken, tomato-based sauce
58100610	Enchilada with chicken and beans, tomato-based sauce
58100620	Enchilada with chicken, beans, and cheese, tomato- based sauce
58100630	Enchilada with chicken and cheese, no beans, tomato- based sauce
58100710	Enchilada with beans, meatless
58100720	Enchilada with beans and cheese, meatless
58100800	Enchilada with cheese, meatless, no beans
58100900	Enchilada with seafood, tomato-based sauce
58101300	Taco or tostada with beef, cheese and lettuce
58101310	Taco or tostada with beef, lettuce, tomato and salsa
58101320	Taco or tostada with beef, cheese, lettuce, tomato and salsa
58101350	Soft taco with beef, cheese, lettuce, tomato and sour cream
58101400	Soft taco with beef, cheese, and lettuce
58101450	Soft taco with chicken, cheese, and lettuce
58101460	Soft taco with chicken, cheese, lettuce, tomato and sour cream
58101510	Taco or tostada with chicken or turkey, lettuce, tomato and salsa
58101520	Taco or tostada with chicken, cheese, lettuce, tomato and salsa
58101530	Soft taco with beef, cheese, lettuce, tomato and salsa
58101540	Taco or tostada with fish, lettuce, tomato, salsa
58101600	Soft taco with bean, cheese, and lettuce
58101610	Soft taco with bean, cheese, lettuce, and tomato and/or salsa
58101615	Soft taco with bean, cheese, lettuce, tomato and/or salsa, and sour cream
58101710	Taco or tostada with beans, meatless, with lettuce, tomato and salsa
58101720	Taco or tostada with beans and cheese, meatless, with lettuce, tomato and salsa
58101730	Taco or tostada with beans, cheese, meat, lettuce, tomato and salsa
58101740	Soft taco with egg and potato
58101741	Soft taco with egg, potato, and cheese
58101742	Soft taco with egg, potato, cheese, tomato and/or salsa
58104260	Chalupa with beans, cheese, lettuce and tomato
58104280	Chalupa with beef, cheese, lettuce, tomato and sour cream
58104290	Chalupa with beef, cheese, lettuce, tomato and salsa
58104310	Chalupa with beans, chicken, cheese, lettuce and tomato
58104320	Chalupa with chicken, cheese, lettuce, tomato and sour cream
58104340	Chalupa with chicken, cheese, lettuce, tomato and salsa
58104450	Chimichanga with beef and tomato
58104490	Chimichanga, NFS
58104500	Chimichanga with beef, beans, lettuce and tomato
58104510	Chimichanga with beef, cheese, lettuce and tomato
58104520	Chimichanga with beans and cheese, meatless, with lettuce and tomato
58104530	Chimichanga with chicken and cheese
58104550	Chimichanga with chicken, sour cream, lettuce and tomato, no cheese
58104600	Chimichanga with beef and rice
58104710	Quesadilla with cheese, meatless
58104730	Quesadilla with meat and cheese

58104740	Quesadilla with poultry and cheese
58104820	Taquitos with meat
58104830	Taquitos with chicken
58105000	Fajita with chicken and vegetables
58105050	Fajita with beef and vegetables
58105100	Pupusa, cheese-filled
58105105	Pupusa, bean-filled
58105110	Pupusa, meat-filled
58115110	Tamale casserole, Puerto Rican style (Tamales en cazuela)
58115150	Tamal in a leaf, Puerto Rican style (Tamales en hoja)
58115210	Taco with crab meat, Puerto Rican style (Taco de jueye)
58128120	Cornmeal dressing with chicken or turkey and vegetables

Crackers

[Magnesium L-Threonate] = 0.12%

54001000	Crackers, NS as to sweet or nonsweet
54101010	Cracker, animal
54102010	Crackers, graham
54102020	Crackers, graham, chocolate covered
54102050	Crackers, oatmeal
54102060	Crackers, Cuban
54102070	Crackers, Cuca
54102080	Crackers, graham, with raisins
54102100	Crackers, graham, lowfat
54102110	Crackers, graham, fat free
54102200	Crackers, graham, sandwich-type, with filling
54201010	Crackers, matzo, low sodium
54202010	Crackers, saltine, low sodium
54202050	Crackers, saltine, fat free, low sodium
54203010	Crackers, toast thins (rye, wheat, white flour), low sodium
54204010	Cracker, 100% whole wheat, low sodium
54205010	Cracker, snack, low sodium
54205030	Cracker, cheese, low sodium
54205100	Cracker, snack, lowfat, low sodium
54206010	Puffed rice cake without salt
54207010	Crispbread, wheat, low sodium
54210010	Cracker, multigrain, salt free
54222000	Crispbread, rye, low sodium
54301000	Cracker, snack
54301100	Cracker, snack, reduced fat
54301200	Cracker, snack, fat free
54304000	Cracker, cheese
54304100	Cracker, cheese, reduced fat
54304500	Cracker, high fiber, no added fat
54305000	Crispbread, wheat, no added fat
54305500	Crispbread, wheat or rye, extra crispy
54307000	Crackers, matzo
54308000	Crackers, milk
54309000	Crackers, oat
54313000	Crackers, oyster
54318500	Rice cake, cracker-type
54319000	Crackers, rice
54319010	Puffed rice cake

54319020	Popcorn cake
54319200	Puffed wheat cake
54322000	Crispbread, rye, no added fat
54325000	Crackers, saltine
54325050	Crackers, saltine, whole wheat
54327950	Crackers, cylindrical, peanut-butter filled
54328000	Crackers, sandwich-type, NFS
54328100	Cracker, sandwich-type, peanut butter filled
54328110	Cracker, sandwich-type, peanut butter filled, reduced fat
54328200	Cracker, sandwich-type, cheese-filled
54334000	Crackers, toast thins (rye, pumpernickel, white flour)
54336000	Crackers, water biscuits
54337000	Cracker, 100% whole wheat
54337050	Cracker, 100% whole wheat, reduced fat
54337100	Crackers, whole wheat and bran
54338000	Crackers, wheat
54338100	Crackers, wheat, reduced fat
54339000	Crackers, corn

Muffins and English Muffins

[Magnesium L-Threonate] = 0.12%

51186010	Muffin, English
51186020	Muffin, English, toasted
51186100	Muffin, English, with raisins
51186120	Muffin, English, with raisins, toasted
51186130	Muffin, English, cheese
51186140	Muffin, English, cheese, toasted
51186160	Muffin, English, with fruit other than raisins
51186180	Muffin, English, with fruit other than raisins, toasted
51202000	Muffin, English, whole wheat, 100%
51202020	Muffin, English, whole wheat, 100%, toasted
51202050	Muffin, English, whole wheat, 100%, with raisins
51202060	Muffin, English, whole wheat, 100%, with raisins, toasted
51302500	Muffin, English, wheat bran
51302510	Muffin, English, wheat bran, toasted
51302520	Muffin, English, wheat bran, with raisins
51302530	Muffin, English, wheat bran, with raisins, toasted
51303010	Muffin, English, wheat or cracked wheat
51303020	Muffin, English, wheat or cracked wheat, toasted
51303030	Muffin, English, whole wheat, NS as to 100%
51303040	Muffin, English, whole wheat, NS as to 100%, toasted
51303050	Muffin, English, wheat or cracked wheat, with raisins
51303060	Muffin, English, wheat or cracked wheat, with raisins, toasted
51303070	Muffin, English, whole wheat, NS as to 100%, with raisins
51303080	Muffin, English, whole wheat, NS as to 100%, with raisins, toasted
51401200	Muffin, English, rye
51401210	Muffin, English, rye, toasted
51404550	Muffin, English, pumpernickel
51404560	Muffin, English, pumpernickel, toasted
51503000	Muffin, English, oat bran
51503010	Muffin, English, oat bran, toasted
51503040	Muffin, English, oat bran, with raisins
51503050	Muffin, English, oat bran with raisins, toasted

51630200	Muffin, English, multigrain
51630210	Muffin, English, multigrain, toasted
52301000	Muffin, NFS
52302010	Muffin, fruit and/or nuts
52302020	Muffin, fruit and/or nut, low fat
52302100	Muffin, fruit, fat free, cholesterol free
52302500	Muffin, chocolate chip
52302600	Muffin, chocolate
52302610	Muffin, chocolate, lowfat
52303010	Muffin, whole wheat
52303500	Muffin, wheat
52303550	Muffin, buckwheat
52304010	Muffin, wheat bran
52304040	Muffin, bran with fruit, lowfat
52304060	Muffin, bran with fruit, no fat, no cholesterol
52304100	Muffin, oatmeal
52304150	Muffin, oat bran
52304200	Muffin, oat bran with fruit and/or nuts
52306010	Muffin, plain
52306300	Muffin, cheese
52306500	Muffin, pumpkin
52306550	Muffin, zucchini
52306700	Muffin, carrot
52307020	Muffin, multigrain, with nuts
52307120	Muffin, multigrain, with fruit
52308010	Matzo, fritters
52308020	Matzo ball
52311010	Popover

Pancakes and Waffles

[Magnesium L-Threonate] = 0.12%

55101000	Pancakes, plain
55101010	Pancakes, reduced calorie, high fiber
55101020	Pancakes, plain, fat free
55103000	Pancakes, with fruit
55103100	Pancakes, with chocolate chips
55105000	Pancakes, buckwheat
55105100	Pancakes, cornmeal
55105200	Pancakes, whole wheat
55105300	Pancakes, sour dough
55105400	Pancakes, rye
55201000	Waffle, plain
55202000	Waffle, wheat, bran, or multigrain
55203000	Waffle, fruit
55203500	Waffle, nut and honey
55203600	Waffle, chocolate chip
55204000	Waffle, cornmeal
55205000	Waffle, 100% whole wheat or 100% whole grain
55206000	Waffle, oat bran
55207000	Waffle, multi-bran
55211000	Waffle, plain, fat free
55211050	Waffle, plain, lowfat
55301000	French toast, plain

55301050	French toast sticks, plain
55310100	Bread fritters, Puerto Rican style (Torrejas gallegas, Galician fritters)
55401000	Crepe, plain

Mixed foods containing Pancakes and Waffles

Adjusted for pancake and waffle content of 30%

[Magnesium L-Threonate] = 0.036%

58120110	Crepes, filled with meat, fish, or poultry, with sauce
58120120	Crepe, filled with beef, pork, fish and/or poultry, no sauce on top

Pastries

[Magnesium L-Threonate] = 0.12%

52320100	Toaster muffin, fruit, untoasted
52320110	Toaster muffin, fruit, toasted
53300100	Pie, NFS
53300170	Pie, individual size or tart, NFS
53300180	Pie, fried, NFS
53301000	Pie, apple, two crust
53301070	Pie, apple, individual size or tart
53301080	Pie, apple, fried pie
53301500	Pie, apple, one crust
53301750	Pie, apple, diet
53302000	Pie, apricot, two crust
53302070	Pie, apricot, individual size or tart
53302080	Pie, apricot, fried pie
53303000	Pie, blackberry, two crust
53303070	Pie, blackberry, individual size or tart
53303500	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry; two crust
53303510	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry; one crust
53303570	Pie, berry, not blackberry, blueberry, boysenberry, huckleberry, raspberry, or strawberry, individual size or tart
53304000	Pie, blueberry, two crust
53304050	Pie, blueberry, one crust
53304070	Pie, blueberry, individual size or tart
53305000	Pie, cherry, two crust
53305010	Pie, cherry, one crust
53305070	Pie, cherry, individual size or tart
53305080	Pie, cherry, fried pie
53305700	Pie, lemon (not cream or meringue)
53305720	Pie, lemon (not cream or meringue), individual size or tart
53305750	Pie, lemon, fried pie
53306000	Pie, mince, two crust
53306070	Pie, mince, individual size or tart
53307000	Pie, peach, two crust
53307050	Pie, peach, one crust
53307070	Pie, peach, individual size or tart
53307080	Pie, peach, fried pie
53307500	Pie, pear, two crust
53307570	Pie, pear, individual size or tart
53308000	Pie, pineapple, two crust

53308070	Pie, pineapple, individual size or tart
53308300	Pie, plum, two crust
53308500	Pie, prune, one crust
53309000	Pie, raisin, two crust
53309070	Pie, raisin, individual size or tart
53310000	Pie, raspberry, one crust
53310050	Pie, raspberry, two crust
53311000	Pie, rhubarb, two crust
53311050	Pie, rhubarb, one crust
53311070	Pie, rhubarb, individual size or tart
53312000	Pie, strawberry, one crust
53313000	Pie, strawberry-rhubarb, two crust
53314000	Pie, strawberry, individual size or tart
53340000	Pie, apple-sour cream
53340500	Pie, cherry, made with cream cheese and sour cream
53341000	Pie, banana cream
53341070	Pie, banana cream, individual size or tart
53341500	Pie, buttermilk
53341750	Pie, chess
53342000	Pie, chocolate cream
53342070	Pie, chocolate cream, individual size or tart
53343000	Pie, coconut cream
53343070	Pie, coconut cream, individual size or tart
53344000	Pie, custard
53344070	Pie, custard, individual size or tart
53344200	Mixed fruit tart filled with custard or cream cheese
53344300	Dessert pizza
53345000	Pie, lemon cream
53345070	Pie, lemon cream, individual size or tart
53346000	Pie, peanut butter cream
53346500	Pie, pineapple cream
53347000	Pie, pumpkin
53347070	Pie, pumpkin, individual size or tart
53347100	Pie, raspberry cream
53347500	Pie, sour cream, raisin
53347600	Pie, squash
53348000	Pie, strawberry cream
53348070	Pie, strawberry cream, individual size or tart
53360000	Pie, sweetpotato
53365000	Pie, vanilla cream
53366000	Pie, yogurt, frozen
53370000	Pie, chiffon, not chocolate
53371000	Pie, chiffon, chocolate
53371100	Pie, chiffon, with liqueur
53373000	Pie, black bottom
53381000	Pie, lemon meringue
53381070	Pie, lemon meringue, individual size or tart
53382000	Pie, chocolate-marshmallow
53385000	Pie, pecan
53385070	Pie, pecan, individual size or tart
53385500	Pie, oatmeal
53386000	Pie, pudding, flavors other than chocolate
53386050	Pie, pudding, flavors other than chocolate, individual size or tart
53386250	Pie, pudding, chocolate, with chocolate coating, individual size

53386500	Pie, pudding, flavors other than chocolate, with chocolate coating, individual size
53387000	Pie, Toll house chocolate chip
53390000	Pie, shoo-fly
53390100	Pie, tofu with fruit
53391000	Pie shell
53391100	Pie shell, graham cracker
53391150	Pie shell, chocolate wafer
53391200	Vanilla wafer dessert base
53400200	Blintz, cheese-filled
53400300	Blintz, fruit-filled
53410100	Cobbler, apple
53410200	Cobbler, apricot
53410300	Cobbler, berry
53410500	Cobbler, cherry
53410800	Cobbler, peach
53410850	Cobbler, pear
53410860	Cobbler, pineapple
53410880	Cobbler, plum
53410900	Cobbler, rhubarb
53415100	Crisp, apple, apple dessert
53415120	Fritter, apple
53415200	Fritter, banana
53415220	Fritter, berry
53415300	Crisp, blueberry
53415400	Crisp, cherry
53415500	Crisp, peach
53415600	Crisp, rhubarb
53420000	Cream puff, eclair, custard or cream filled, NS as to icing
53420100	Cream puff, eclair, custard or cream filled, not iced
53420200	Cream puff, eclair, custard or cream filled, iced
53420210	Cream puff, eclair, custard or cream filled, iced, reduced fat
53420250	Cream puff, no filling or icing
53420300	Air filled fritter or fried puff, without syrup, Puerto Rican style (Bunuelos de viento)
53420310	Wheat flour fritter, without syrup
53420400	Sopaipilla, without syrup or honey
53420410	Sopaipilla with syrup or honey
53430000	Crepe, dessert type, NS as to filling
53430100	Crepe, dessert type, chocolate-filled
53430200	Crepe, dessert type, fruit-filled
53430250	Crepe suzette
53430300	Crepe, dessert type, ice cream-filled
53430700	Tamale, sweet
53430750	Tamale, sweet, with fruit
53440000	Strudel, apple
53440300	Strudel, berry
53440500	Strudel, cherry
53440600	Strudel, cheese
53440700	Strudel, peach
53440750	Strudel, pineapple
53440800	Strudel, cheese and fruit
53441110	Baklava
53441210	Basbousa (semolina dessert dish)
53450000	Turnover or dumpling, apple
53450300	Turnover or dumpling, berry

53450500	Turnover or dumpling, cherry
53450800	Turnover or dumpling, lemon
53451000	Turnover or dumpling, peach
53451500	Turnover, guava
53451750	Turnover, pumpkin
53452100	Pastry, fruit-filled
53452120	Pastry, Oriental, made with bean or lotus seed paste filling (baked)
53452130	Pastry, Oriental, made with bean paste and salted egg yolk filling (baked)
53452150	Pastry, Chinese, made with rice flour
53452170	Pastry, cookie type, fried
53452200	Pastry, Italian, with cheese
53452400	Pastry, puff
53452420	Pastry, puff, custard or cream filled, iced or not iced
53452450	Cheese pastry puffs
53452500	Pastry, mainly flour and water, fried
53453150	Empanada, Mexican turnover, fruit-filled
53453170	Empanada, Mexican turnover, pumpkin
53500100	Breakfast pastry, NFS
53510000	Danish pastry, plain or spice
53510100	Danish pastry, with fruit
53510200	Danish pastry, with nuts
53511000	Danish pastry, with cheese
53511500	Danish pastry, with cheese, fat free, cholesterol free
53520000	Doughnut, NS as to cake or yeast
53520110	Doughnut, cake type
53520120	Doughnut, chocolate, cake type
53520140	Doughnut, cake type, chocolate covered
53520150	Doughnut, cake type, chocolate covered, dipped in peanuts
53520160	Doughnut, chocolate, cake type, with chocolate icing
53520200	Churros
53520500	Doughnut, oriental
53520600	Cruller, NFS
53520700	French cruller
53521100	Doughnut, chocolate, raised or yeast, with chocolate icing
53521110	Doughnut, raised or yeast
53521120	Doughnut, chocolate, raised or yeast
53521130	Doughnut, raised or yeast, chocolate covered
53521140	Doughnut, jelly
53521210	Doughnut, custard-filled
53521220	Doughnut, chocolate cream-filled
53521230	Doughnut, custard-filled, with icing
53521250	Doughnut, wheat
53521300	Doughnut, wheat, chocolate covered
53530000	Breakfast tart
53530010	Breakfast tart, lowfat
58109000	Italian pie, meatless
58109010	Italian pie with meat
58110110	Egg roll, meatless
58110120	Egg roll, with shrimp
58110130	Egg roll, with beef and/or pork
58110170	Egg roll, with chicken or turkey
58110200	Roll with meat and/or shrimp, vegetables and rice paper (not fried)
58111110	Won ton (wonton), fried, meat filled
58111120	Won ton (wonton), fried, meatless

58111200	Puffs, fried, crab meat and cream cheese filled
58116110	Meat turnover, Puerto Rican style (Pastelillo de carne; Empanadilla)
58116115	Empanada, Mexican turnover, filled with cheese and vegetables
58116120	Empanada, Mexican turnover, filled with meat and vegetables
58116130	Empanada, Mexican turnover, filled with chicken and vegetables
58116210	Meat pie, Puerto Rican style (Pastelon de carne)
58116310	Cheese turnover, Puerto Rican style (Pastelillo de queso; Empanadilla)
58117410	Codfish fritter, Puerto Rican style (Bacalaitos fritos)
58121510	Dumpling, meat-filled
58121610	Dumpling, potato- or cheese-filled
58122310	Knish, potato (pastry filled with potato)
58122320	Knish, cheese (pastry filled with cheese)
58122330	Knish, meat (pastry filled with meat)
58124210	Pastry, cheese-filled
58124250	Spanakopitta
58124500	Pastry, filled with potatoes and peas, fried
58125110	Quiche with meat, poultry or fish
58125120	Spinach quiche, meatless
58125180	Cheese quiche, meatless
58126000	Bierock (turnover filled with ground beef and cabbage mixture)
58126110	Turnover, meat-filled, no gravy
58126120	Turnover, meat-filled, with gravy
58126130	Turnover, meat- and cheese-filled, no gravy
58126140	Turnover, meat- and bean-filled, no gravy
58126150	Turnover, meat- and cheese-filled, tomato-based sauce
58126170	Turnover, meat-and vegetable- filled (no potatoes, no gravy)
58126180	Turnover, meat-, potato-, and vegetable-filled, no gravy
58126270	Turnover, chicken- or turkey-, and cheese-filled, no gravy
58126280	Turnover, chicken- or turkey-, and vegetable-filled, lower in fat
58126290	Turnover, meat- and cheese-filled, lower in fat
58126300	Turnover, meat- and cheese-filled, tomato-based sauce, lower in fat
58126310	Turnover, chicken, with gravy
58126400	Turnover, filled with egg, meat and cheese
58126410	Turnover, filled with egg, meat, and cheese, lower in fat
58127110	Vegetables in pastry
58127150	Vegetables and cheese in pastry
58127500	Vegetable submarine sandwich, with fat free spread

Beverages and Beverage Bases

Bottled Water

[Magnesium L-Threonate] = 0.0885%

94100100	Water, bottled, unsweetened
94100200	Water, bottled, sweetened, with low or no calorie sweetener
94100300	Water, fruit flavored, sweetened, with high fructose corn syrup and low calorie sweetener
94210100	Propel Water
94210200	Glaceau Water

Carbonated Fruit Drinks

[Magnesium L-Threonate] = 0.0885%

92410510	Soft drink, fruit-flavored, caffeine free
92410520	Soft drink, fruit-flavored, sugar free, caffeine free

92410550	Soft drink, fruit flavored, caffeine containing
92410560	Soft drink, fruit flavored, caffeine containing, sugar-free
92431000	Carbonated juice drink, NS as to type of juice
92432000	Carbonated citrus juice drink
92433000	Carbonated noncitrus juice drink

Carbonated Soft Drinks

[Magnesium L-Threonate] = 0.0885%

92400000	Soft drink, NFS
92400100	Soft drink, NFS, sugar-free
92410110	Carbonated water, sweetened
92410210	Carbonated water, unsweetened
92410250	Carbonated water, sweetened, with low-calorie or no-calorie sweetener
92410310	Soft drink, cola-type
92410315	Soft drink, cola type, reduced sugar
92410320	Soft drink, cola-type, sugar-free
92410330	Soft drink, cola-type, with higher caffeine
92410340	Soft drink, cola-type, decaffeinated
92410350	Soft drink, cola-type, decaffeinated, sugar-free
92410360	Soft drink, pepper-type
92410370	Soft drink, pepper-type, sugar-free
92410390	Soft drink, pepper-type, decaffeinated
92410400	Soft drink, pepper-type, decaffeinated, sugar-free
92410410	Cream soda
92410420	Cream soda, sugar-free
92410610	Ginger ale
92410620	Ginger ale, sugar-free
92410710	Root beer
92410720	Root beer, sugar-free
92410810	Chocolate-flavored soda
92410820	Chocolate-flavored soda, sugar-free
92411510	Cola with fruit or vanilla flavor
92411520	Cola with chocolate flavor
92411610	Cola with fruit or vanilla flavor, sugar-free
92411620	Cola with chocolate flavor, sugar-free
92416010	Mavi drink
92417010	Soft drink, ale type

Mixed Foods containing Carbonated Soft Drinks

Adjusted for carbonated soft drinks content of 50 to 90%

[Magnesium L-Threonate] = 0.04425 to 0.0797%

93301031	Canadian Club and soda
93301060	Gin and Tonic
93301080	High ball
93301142	Seven and Seven
93301150	Tom Collins
93301170	Bourbon and soda
93301180	Mixed Drinks (for recipe modifications)
93301190	Rum and cola
93301230	Sloe gin fizz
93301330	Gin Rickey

93301600 Gin fizz
93504100 Rum cooler

Mixed Foods containing Carbonated Soft Drinks

Adjusted for carbonated soft drinks content of up to 50%

[Magnesium L-Threonate] = up to 0.4425%

93301270 Fruit punch, alcoholic
93301280 Singapore Sling
93301360 Long Island iced tea

Energy and Sports Drinks

[Magnesium L-Threonate] = 0.0885%

92560000 Fruit-flavored thirst quencher beverage
92560100 Gatorade Thirst Quencher sports drink
92560200 Powerade sports drink
92565000 Fruit-flavored sports drink or thirst quencher beverage, low calorie
92565100 Gatorade G2 thirst quencher sports drink, low calorie
92565200 Powerade Zero sports drink, low calorie
92570100 Fluid replacement, electrolyte solution
92570500 Fluid replacement, 5% glucose in water
92650000 Red Bull Energy Drink
92650005 Red Bull Energy Drink, sugar-free
92650100 Full Throttle Energy Drink
92650200 Monster Energy Drink
92650205 Mountain Dew AMP Energy Drink
92650210 Mountain Dew AMP Energy Drink, sugar-free
92650700 Rockstar Energy Drink
92650705 Rockstar Energy Drink, sugar-free
92650800 Vault Energy Drink
92650805 Vault Zero Energy drink
92651000 Energy drink

Fruit Drinks and Aides

[Magnesium L-Threonate] = 0.0885%

92510610 Fruit juice drink
92510650 Tamarind drink, Puerto Rican (Refresco de tamarindo)
92510720 Fruit punch, made with fruit juice and soda
92510730 Fruit punch, made with soda, fruit juice, and sherbet or ice cream
92511010 Fruit flavored drink (formerly lemonade)
92511250 Citrus fruit juice drink, containing 40-50% juice
92512050 Frozen daiquiri mix, from frozen concentrate, reconstituted
92512090 Pina Colada, nonalcoholic
92512110 Whiskey sour, nonalcoholic
92530410 Fruit flavored drink, with high vitamin C
92530510 Cranberry juice drink or cocktail, with high vitamin C
92530610 Fruit juice drink, with high vitamin C
92531030 Fruit juice drink, with thiamin (vitamin B1) and high vitamin C
92541010 Fruit flavored drink, made from powdered mix
92542000 Fruit flavored drink, made from powdered mix, with high vitamin C
92550030 Fruit juice drink, low calorie, with high vitamin C
92550040 Fruit juice drink, low calorie

92550110	Cranberry juice drink or cocktail, low calorie, with high vitamin C
92550350	Light orange juice beverage, 40-50% juice, lower sugar and calories, with artificial sweetener
92550610	Fruit flavored drink, low calorie, with high vitamin C
92550620	Fruit flavored drink, low calorie
92552000	Fruit flavored drink, made from powdered mix, low calorie, with high vitamin C
92552010	Fruit flavored drink, made from powdered mix, low calorie
92552020	Fruit juice drink, reduced sugar, with thiamin (vitamin B1) and high vitamin C
92552030	Fruit juice drink, reduced sugar, with vitamin E
92582100	Fruit juice drink, with high vitamin C, plus added calcium
92582110	Fruit juice drink, with thiamin (vitamin B1) and high vitamin C plus calcium
92582120	Fruit flavored drink, reduced sugar, with high vitamin C, plus added calcium

Fruit Drinks and Ades, Frozen

Adjusted for not being reconstituted, multiplied by a factor of 3
[Magnesium L-Threonate] = 0.2655%

92511000	Lemonade, frozen concentrate, not reconstituted
92512040	Frozen daiquiri mix, frozen concentrate, not reconstituted

Fruit Drinks and Ades, Powdered

Adjusted for not being reconstituted, multiplied by a factor of 15
[Magnesium L-Threonate] = 1.3275%

92900100	Tang, dry concentrate
92900110	Fruit-flavored beverage, dry concentrate, with sugar, not reconstituted
92900200	Fruit-flavored beverage, dry concentrate, low calorie, not reconstituted
92900300	Fruit-flavored thirst quencher beverage, dry concentrate, not reconstituted

Breakfast Cereals

Instant and Regular Hot Cereals

[Magnesium L-Threonate] = 0.12%

56200300	Cereal, cooked, NFS
56200350	Cereal, cooked, instant, NS as to grain
56200490	Buckwheat groats, cooked, NS as to fat added in cooking
56200500	Buckwheat groats, cooked, fat not added in cooking
56200510	Buckwheat groats, cooked, fat added in cooking
56200990	Grits, cooked, corn or hominy, NS as to regular, quick or instant, NS as to fat added in cooking
56201000	Grits, cooked, corn or hominy, NS as to regular, quick, or instant, fat not added in cooking
56201010	Grits, cooked, corn or hominy, regular, fat not added in cooking
56201020	Grits, cooked, corn or hominy, regular, fat added in cooking
56201030	Grits, cooked, corn or hominy, regular, NS as to fat added in cooking
56201040	Grits, cooked, corn or hominy, NS as to regular, quick, or instant, fat added in cooking
56201060	Grits, cooked, corn or hominy, with cheese, NS as to regular, quick, or instant, NS as to fat added in cooking
56201061	Grits, cooked, corn or hominy, with cheese, NS as to regular, quick, or instant, fat not added in cooking
56201062	Grits, cooked, corn or hominy, with cheese, NS as to regular, quick, or instant, fat added in cooking
56201070	Grits, cooked, corn or hominy, with cheese, regular, NS as to fat added in cooking
56201071	Grits, cooked, corn or hominy, with cheese, regular, fat not added in cooking

56201072	Grits, cooked, corn or hominy, with cheese, regular, fat added in cooking
56201080	Grits, cooked, corn or hominy, with cheese, quick, NS as to fat added in cooking
56201081	Grits, cooked, corn or hominy, with cheese, quick, fat not added in cooking
56201082	Grits, cooked, corn or hominy, with cheese, quick, fat added in cooking
56201090	Grits, cooked, corn or hominy, with cheese, instant, NS as to fat added in cooking
56201091	Grits, cooked, corn or hominy, with cheese, instant, fat not added in cooking
56201092	Grits, cooked, corn or hominy, with cheese, instant, fat added in cooking
56201110	Grits, cooked, corn or hominy, quick, fat not added in cooking
56201120	Grits, cooked, corn or hominy, quick, fat added in cooking
56201130	Grits, cooked, corn or hominy, quick, NS as to fat added in cooking
56201210	Grits, cooked, corn or hominy, instant, fat not added in cooking
56201220	Grits, cooked, corn or hominy, instant, fat added in cooking
56201230	Grits, cooked, corn or hominy, instant, NS as to fat added in cooking
56201240	Grits, cooked, flavored, corn or hominy, instant, fat not added in cooking
56201250	Grits, cooked, flavored, corn or hominy, instant, fat added in cooking
56201260	Grits, cooked, flavored, corn or hominy, instant, NS as to fat added in cooking
56201300	Grits, cooked, corn or hominy, NS as to regular, quick, or instant, NS as to fat added in cooking, made with milk
56202960	Oatmeal, cooked, NS as to regular, quick or instant; NS as to fat added in cooking
56202970	Oatmeal, cooked, quick (1 or 3 minutes), NS as to fat added in cooking
56202980	Oatmeal, cooked, regular, NS as to fat added in cooking
56203000	Oatmeal, cooked, NS as to regular, quick or instant, fat not added in cooking
56203010	Oatmeal, cooked, regular, fat not added in cooking
56203020	Oatmeal, cooked, quick (1 or 3 minutes), fat not added in cooking
56203030	Oatmeal, cooked, instant, fat not added in cooking
56203040	Oatmeal, cooked, NS as to regular, quick, or instant, fat added in cooking
56203050	Oatmeal, cooked, regular, fat added in cooking
56203060	Oatmeal, cooked, quick (1 or 3 minutes), fat added in cooking
56203070	Oatmeal, cooked, instant, fat added in cooking
56203080	Oatmeal, cooked, instant, NS as to fat added in cooking
56203110	Oatmeal with maple flavor, cooked
56203200	Oatmeal with fruit, cooked
56203210	Oatmeal, NS as to regular, quick, or instant, made with milk, fat not added in cooking
56203211	Oatmeal, cooked, regular, made with milk, fat not added in cooking
56203212	Oatmeal, cooked, quick (1 or 3 minutes), made with milk, fat not added in cooking
56203213	Oatmeal, cooked, instant, made with milk, fat not added in cooking
56203220	Oatmeal, NS as to regular, quick, or instant, made with milk, fat added in cooking
56203221	Oatmeal, cooked, regular, made with milk, fat added in cooking
56203222	Oatmeal, cooked, quick (1 or 3 minutes), made with milk, fat added in cooking
56203223	Oatmeal, cooked, instant, made with milk, fat added in cooking
56203230	Oatmeal, NS as to regular, quick, or instant, made with milk, NS as to fat added in cooking
56203231	Oatmeal, cooked, regular, made with milk, NS as to fat added in cooking
56203232	Oatmeal, cooked, quick (1 or 3 minutes), made with milk, NS as to fat added in cooking
56203233	Oatmeal, cooked, instant, made with milk, NS as to fat added in cooking
56203540	Oatmeal, made with milk and sugar, Puerto Rican style
56203600	Oatmeal, multigrain, cooked, NS as to fat added in cooking
56203610	Oatmeal, multigrain, cooked, fat not added in cooking
56203620	Oatmeal, multigrain, cooked, fat added in cooking
56208500	Oat bran cereal, cooked, fat not added in cooking
56208510	Oat bran cereal, cooked, fat added in cooking
56208520	Oat bran cereal, cooked, NS as to fat added in cooking
56208530	Oat bran cereal, cooked, made with milk, fat not added in cooking
56208540	Oat bran cereal, cooked, made with milk, fat added in cooking

56208550 Oat bran cereal, cooked, made with milk, NS as to fat added in cooking
56210000 Nestum cereal

Ready-To-Eat Breakfast Cereals

[Magnesium L-Threonate] = 0.12%

57000000 Cereal, NFS
57000050 Kashi cereal, NS as to ready to eat or cooked
57000100 Oat cereal, NFS
57100100 Cereal, ready-to-eat, NFS
57100400 Character cereals, TV or movie, General Mills
57100500 Character cereals, TV or movie, Kellogg's
57101000 All-Bran
57101020 All-Bran with Extra Fiber
57102000 Alpen
57103000 Alpha-Bits
57103020 Alpha-bits with marshmallows
57103050 Amaranth Flakes
57103100 Apple Cinnamon Cheerios
57103500 Apple Cinnamon Squares Mini-Wheats, Kellogg's (formerly Apple Cinnamon Squares)
57104000 Apple Jacks
57106050 Banana Nut Crunch Cereal (Post)
57106100 Basic 4
57106250 Berry Berry Kix
57106260 Berry Burst Cheerios
57106530 Blueberry Morning, Post
57107000 Booberry
57110000 All-Bran Bran Buds, Kellogg's (formerly Bran Buds)
57111000 Bran Chex
57117000 Cap'n Crunch
57117500 Cap'n Crunch's Christmas Crunch
57119000 Cap'n Crunch's Crunch Berries
57120000 Cap'n Crunch's Peanut Butter Crunch
57123000 Cheerios
57124000 Chex cereal, NFS
57124200 Chocolate flavored frosted puffed corn cereal
57124300 Chocolate Lucky Charms
57125000 Cinnamon Toast Crunch
57125010 Cinnamon Toast Crunch Reduced Sugar
57125900 Honey Nut Clusters (formerly called Clusters)
57126000 Cocoa Krispies
57126500 Cocoa Blasts, Quaker
57127000 Cocoa Pebbles
57128000 Cocoa Puffs
57128880 Complete Oat Bran Flakes, Kellogg's (formerly Common Sense Oat Bran, plain)
57130000 Cookie-Crisp
57131000 Crunchy Corn Bran, Quaker
57132000 Corn Chex
57134000 Corn flakes, NFS
57134090 Corn flakes, low sodium
57135000 Corn flakes, Kellogg's
57137000 Corn Puffs
57138000 Total Corn Flakes
57139000 Count Chocula

57143000	Cracklin' Oat Bran
57143500	Cranberry Almond Crunch, Post
57144000	Crisp Crunch
57148000	Crispix
57148500	Crispy Brown Rice Cereal
57151000	Crispy Rice
57152000	Crispy Wheats'n Raisins
57160000	Curves Fruit and Nut Crunch Cereal
57201800	Disney cereals, Kellogg's
57201900	Dora the Explorer Cereal
57206000	Familia
57206700	Fiber One
57206800	Fiber 7 Flakes, Health Valley
57207000	Bran Flakes, NFS (formerly 40% Bran Flakes, NFS)
57208000	All-Bran Complete Wheat Flakes, Kellogg's
57209000	Natural Bran Flakes, Post (formerly called 40% Bran Flakes, Post)
57211000	Frankenberry
57212100	French Toast Crunch, General Mills
57213000	Froot Loops
57213005	Froot Loops Cereal Straws
57213850	Frosted Cheerios
57213900	Frosted Chex
57214000	Frosted Mini-Wheats
57214100	Frosted Wheat Bites
57215000	Frosty O's
57216000	Frosted rice, NFS
57218000	Frosted Rice Krispies, Kellogg's
57219000	Fruit & Fibre (fiber), NFS
57221000	Fruit & Fibre (fiber) with dates, raisins, and walnuts
57221650	Fruit Harvest cereal, Kellogg's
57221700	Fruit Rings, NFS
57221800	Fruit Whirls
57221810	Fruity Cheerios
57223000	Fruity Pebbles
57224000	Golden Grahams
57227000	Granola, NFS
57229000	Granola, lowfat, Kellogg's
57229500	Granola with Raisins, lowfat, Kellogg's
57230000	Grape-Nuts
57231000	Grape-Nuts Flakes
57231200	Great Grains, Raisin, Date, and Pecan Whole Grain Cereal, Post
57231250	Great Grains Double Pecan Whole Grain Cereal, Post
57237100	Honey Bunches of Oats
57237200	Honey Bunches of Oats with Vanilla Clusters, Post
57237300	Honey Bunches of Oats with Almonds, Post
57238000	Honeycomb, plain
57239000	Honeycomb, strawberry
57239100	Honey Crunch Corn Flakes, Kellogg's
57240100	Honey Nut Chex
57241000	Honey Nut Cheerios
57241200	Honey Nut Shredded Wheat, Post
57243000	Honey Smacks, Kellogg's (formerly Smacks; Honey Smacks)
57243870	Jenny O's
57244000	Just Right

57245000	Just Right Fruit and Nut (formerly Just Right with raisins, dates, and nuts)
57301100	Kaboom
57301500	Kashi, Puffed
57301505	Kashi Autumn Wheat
57301510	Kashi GOLEAN
57301511	Kashi GOLEAN Crunch
57301512	Kashi GOLEAN Crunch Honey Almond Flax
57301520	Kashi Good Friends
57301530	Kashi Heart to Heart Honey Toasted Oat
57302100	King Vitaman
57303100	Kix
57304100	Life (plain and cinnamon)
57305100	Lucky Charms
57305150	Frosted oat cereal with marshmallows
57305170	Malt-O-Meal Coco-Roos
57305180	Malt-O-Meal Corn Bursts
57305200	Malt-O-Meal Crispy Rice
57305210	Malt-O-Meal Frosted Flakes
57305300	Malt-O-Meal Fruity Dyno-Bites
57305500	Malt-O-Meal Honey and Nut Toasty O's
57305600	Malt-O-Meal Marshmallow Mateys
57306100	Malt-O-Meal Puffed Rice
57306120	Malt-O-Meal Puffed Wheat
57306500	Malt-O-Meal Golden Puffs (formerly Sugar Puffs)
57306700	Malt-O-Meal Toasted Oat Cereal
57306800	Malt-O-meal Tootie Fruities
57307010	Maple Pecan Crunch Cereal, Post
57307150	Marshmallow Safari, Quaker
57307500	Millet, puffed
57307600	Mini-Swirlz Cinnamon Bun Cereal, Kellogg's
57308150	Mueslix cereal, NFS
57308190	Muesli, dried fruit and nuts (formerly Muesli with raisins, dates, and almonds)
57308300	Multi Bran Chex
57308400	MultiGrain Cheerios
57308900	Natural Muesli, Jenny's Cuisine
57309100	Nature Valley Granola, with fruit and nuts
57311700	Nu System Cuisine Toasted Grain Circles
57316200	Nutty Nuggets, Ralston Purina
57316300	Oat Bran Flakes, Health Valley
57316410	Oatmeal Crisp, Apple Cinnamon (formerly Oatmeal Crisp with Apples)
57316450	Oatmeal Crisp with Almonds
57316500	Oatmeal Crisp, Raisin (formerly Oatmeal Raisin Crisp)
57316710	Oh's, Honey Graham
57316750	Oh's, Fruitangy, Quaker
57318000	100% Bran
57319000	100% Natural Cereal, plain, Quaker
57319500	Sun Country 100% Natural Granola, with Almonds
57320500	100 % Natural Cereal, with oats, honey and raisins, Quaker
57321500	100 % Natural Wholegrain Cereal with raisins, lowfat, Quaker
57321700	Optimum, Nature's Path
57321800	Optimum Slim, Nature's Path
57322500	Oreo O's cereal, Post
57323000	Sweet Crunch, Quaker (formerly called Popeye)
57323050	Sweet Puffs, Quaker

57325000	Product 19
57327450	Quaker Oat Bran Cereal
57327500	Quaker Oatmeal Squares (formerly Quaker Oat Squares)
57328000	Quisp
57329000	Raisin bran, NFS
57330000	Raisin Bran, Kellogg's
57330010	Raisin Bran Crunch, Kellogg's
57331000	Raisin Bran, Post
57332050	Raisin Bran, Total
57332100	Raisin Nut Bran
57335550	Reese's Peanut Butter Puffs cereal
57336000	Rice Chex
57337000	Rice Flakes, NFS
57339000	Rice Krispies, Kellogg's
57339100	Rice Krispies with Real Strawberries, Kellogg's
57339500	Rice Krispies Treats Cereal, Kellogg's
57340000	Rice, puffed
57341000	Shredded Wheat'N Bran
57341200	Smart Start Strong Heart Antioxidants Cereal, Kellogg's
57342010	Smorz, Kellogg's
57344000	Special K
57344005	Special K Chocolatey Delight
57344010	Special K Red Berries
57344015	Special K Fruit & Yogurt
57344020	Special K Vanilla Almond
57344025	Special K Cinnamon Pecan, Kellogg's
57346500	Oatmeal Honey Nut Heaven, Quaker (formerly Toasted Oatmeal, Honey Nut)
57347000	Corn Pops
57348000	Frosted corn flakes, NFS
57349000	Frosted Flakes, Kellogg's
57349020	Reduced Sugar Frosted Flakes Cereal, Kellogg's
57355000	Golden Crisp (Formerly called Super Golden Crisp)
57401100	Toasted oat cereal
57403100	Toasties, Post
57404100	Malt-O-Meal Toasty O's
57404200	Malt-O-Meal Apple and Cinnamon Toasty O's
57406100	Total
57406105	Total Cranberry Crunch
57407100	Trix
57407110	Trix, reduced sugar
57408100	Uncle Sam Cereal (formerly Uncle Sam's Hi Fiber Cereal)
57409100	Waffle Crisp, Post
57410000	Weetabix Whole Wheat Cereal
57411000	Wheat Chex
57412000	Wheat germ, plain
57413000	Wheat germ, with sugar and honey
57416000	Wheat, puffed, plain
57416010	Wheat, puffed, presweetened with sugar
57417000	Shredded Wheat, 100%
57418000	Wheaties
57419000	Yogurt Burst Cheerios

Chewing Gum

Chewing Gum

[Magnesium L-Threonate] = 0.12%

91800100	Chewing gum, NFS
91801000	Chewing gum, sugared
91802000	Chewing gum, sugarless

Grain Products and Pastas

Cereal grains, prepared

[Magnesium L-Threonate] = 0.12%

50030000	Biscuit mix, dry
55501000	Flour and water patty
55502000	Flour and water gravy
55601000	Flour and milk patty
55610200	Dumpling, fried, Puerto Rican style
55610300	Dumpling, plain
56200390	Barley, cooked, NS as to fat added in cooking
56200400	Barley, cooked, fat not added in cooking
56201510	Cornmeal mush, made with water
56201520	Cornmeal mush, fried
56201530	Cornmeal mush, made with milk
56201540	Cornmeal, made with milk and sugar, Puerto Rican Style (Harina de maiz)
56201550	Cornmeal dumpling
56201560	Cornmeal sticks, boiled
56201600	Cornmeal, lime-treated, cooked (Masa harina)
56201700	Cornstarch with milk, eaten as a cereal (2 tbsp cornstarch in 2-1/2 cups milk)
56201800	Cornstarch, hydrolyzed powder
56204980	Rice, white, cooked, converted, NS as to fat added in cooking
56204990	Rice, white, cooked, regular, NS as to fat added in cooking
56205000	Rice, cooked, NFS
56205010	Rice, white, cooked, regular, fat not added in cooking
56205020	Rice, white, cooked, instant, NS as to fat added in cooking
56205030	Rice, white, cooked, instant, fat not added in cooking
56205040	Rice, white, cooked, converted, fat not added in cooking
56205050	Rice, cream of, cooked, fat not added in cooking
56205060	Rice, cooked, with milk
56205070	Rice, sweet (rice, cooked, with honey)
56205080	Rice, creamed, made with milk and sugar, Puerto Rican style
56205090	Rice, cream of, cooked, fat added in cooking
56205110	Rice, brown, cooked, regular, fat not added in cooking
56205120	Rice, brown, cooked, regular, NS as to fat added in cooking
56205130	Yellow rice, cooked, regular, NS as to fat added in cooking
56205150	Yellow rice, cooked, regular, fat not added in cooking
56205170	Yellow rice, cooked, regular, fat added in cooking
56205190	Rice, white, cooked, glutinous
56205200	Rice, frozen dessert, nondairy, flavors other than chocolate
56205210	Rice, wild, 100%, cooked, fat not added in cooking
56205300	Rice, white and wild, cooked, fat not added in cooking
56205310	Rice, brown and wild, cooked, fat not added in cooking
56205320	Rice, white and wild, cooked, fat added in cooking

56205330	Rice, white and wild, cooked, NS as to fat added in cooking
56205340	Rice, brown and wild, cooked, fat added in cooking
56205350	Rice, brown and wild, cooked, NS as to fat added in cooking
56205400	Rice, cooked, NS as to type, fat added in cooking
56205410	Rice, white, cooked with (fat) oil, Puerto Rican style (Arroz blanco)
56205420	Rice, white, cooked, regular, fat added in cooking
56205430	Rice, white, cooked, instant, fat added in cooking
56205440	Rice, white, cooked, converted, fat added in cooking
56205510	Rice, brown, cooked, regular, fat added in cooking
56205530	Rice, brown, cooked, instant, NS as to fat added in cooking
56205540	Rice, brown, cooked, instant, fat not added in cooking
56205550	Rice, brown, cooked, instant, fat added in cooking
56207100	Wheat, rolled, cooked, fat not added in cooking
56207110	Bulgur, cooked or canned, fat not added in cooking
56207120	Bulgur, cooked or canned, fat added in cooking
56207130	Bulgur, cooked or canned, NS as to fat added in cooking
56207140	Wheat, rolled, cooked, NS as to fat added in cooking
56209000	Rye, cream of, cooked
57603100	Rice polishings
57604100	Whole wheat, cracked
58118110	Cornstarch coconut dessert, Puerto Rican style (Tembleque)
58118210	Cornmeal coconut dessert, Puerto Rican style (Harina de maiz con coco)
58303100	Rice, with broccoli, cheese sauce (frozen side dish)
58303200	Rice, with green beans, water chestnuts, in sherry mushroom sauce (frozen side dish)
58310110	Frozen breakfast, NFS (frozen meal)

Mixed Foods containing Cereal grains, prepared

Adjusted for cereal grains, prepared content of 65 to 90%

[Magnesium L-Threonate] = 0.078 to 0.0797%

27213000	Beef and rice, no sauce (mixture)
58151140	Sushi, with vegetables, rolled in seaweed
58160220	Rice with vegetables, tomato-based sauce (mixture)
58161300	White rice with tomato sauce
58161310	Rice, brown, with tomato sauce
58163110	Rice with gravy
58163210	Rice, creamed
58164110	Rice with raisins

Mixed Foods containing Cereal grains, prepared

Adjusted for cereal grains, prepared content of 40 to 64.99%

[Magnesium L-Threonate] = 0.048 to 0.078%

27213200	Beef and rice with gravy (mixture)
27220110	Pork and rice with tomato-based sauce (mixture)
27220120	Sausage and rice with tomato-based sauce (mixture)
27220310	Ham or pork and rice, no sauce (mixture)
27243000	Chicken or turkey and rice, no sauce (mixture)
27243700	Chicken in cheese sauce with Spanish rice
58117310	Kibby, Puerto Rican style (beef and bulgur) (Plato Arabe)
58117510	Hayacas, Puerto Rican style (hominy, pork or ham, vegetables)
58150110	Rice, fried, meatless
58150310	Rice, fried, NFS
58150320	Rice, fried, with chicken

58150330	Rice, fried, with pork
58150340	Rice, fried, with beef
58150510	Rice, fried, with shrimp
58151110	Sushi, no vegetables, no seafood (no fish or shellfish)
58156610	Pigeon pea asopao (Asopao de gandules)
58156710	Rice with stewed beans, Puerto Rican style
58160110	Rice with beans
58160160	Hopping John (blackeye peas and rice)
58160200	Rice with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, NS as to fat added in cooking
58160202	Rice with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, fat not added in cooking
58160204	Rice with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, fat added in cooking
58160205	Rice with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, NS as to fat added in cooking
58160207	Rice with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, fat not added in cooking
58160209	Rice with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, fat added in cooking
58160290	Rice with corn, NS as to fat added in cooking
58160292	Rice with corn, fat not added in cooking
58160294	Rice with corn, fat added in cooking
58160300	Rice with peas, NS as to fat added in cooking
58160302	Rice with peas, fat not added in cooking
58160304	Rice with peas, fat added in cooking
58160310	Rice with peas and carrots, NS as to fat added in cooking
58160312	Rice with peas and carrots, fat not added in cooking
58160314	Rice with peas and carrots, fat added in cooking
58160320	Rice with tomatoes, NS as to fat added in cooking
58160322	Rice with tomatoes, fat not added in cooking
58160324	Rice with tomatoes, fat added in cooking
58161120	Brown rice casserole with cheese
58161320	Rice, brown, with beans
58161325	Rice, brown, with beans and tomatoes
58161400	Rice, brown, with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, NS as to fat added in cooking
58161402	Rice, brown, with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, fat not added in cooking
58161404	Rice, brown, with vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce, fat added in cooking
58161405	Rice, brown, with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, NS as to fat added in cooking
58161407	Rice, brown, with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, fat not added in cooking
58161409	Rice, brown, with vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce, fat added in cooking
58161420	Rice, brown, with corn, NS as to fat added in cooking
58161422	Rice, brown, with corn, fat not added in cooking
58161424	Rice, brown, with corn, fat added in cooking
58161430	Rice, brown, with peas, NS as to fat added in cooking
58161432	Rice, brown, with peas, fat not added in cooking
58161434	Rice, brown, with peas, fat added in cooking
58161440	Rice, brown, with peas and carrots, NS as to fat added in cooking

58161442	Rice, brown, with peas and carrots, fat not added in cooking
58161444	Rice, brown, with peas and carrots, fat added in cooking
58161450	Rice, brown, with tomatoes, NS as to fat added in cooking
58161452	Rice, brown, with tomatoes, fat not added in cooking
58161454	Rice, brown, with tomatoes, fat added in cooking
58161710	Rice croquette

Mixed Foods containing Cereal grains, prepared

Adjusted for cereal grains, prepared content of up to 39%

[Magnesium L-Threonate] = up to 0.048%

13210260	Rice flour cream, Puerto Rican style (Majarete, manjar blanco)
13210410	Pudding, rice
13210450	Pudding, rice flour, with nuts (Indian dessert)
27115000	Beef with soy-based sauce (mixture)
27115100	Steak teriyaki with sauce (mixture)
27120150	Pork or ham with soy-based sauce (mixture)
27135020	Veal scallopini
27141000	Chicken or turkey cacciatore
27145000	Chicken or turkey teriyaki (chicken or turkey with soy-based sauce)
27146350	Lemon chicken, Chinese style
27150160	Shrimp with lobster sauce (mixture)
27150190	Lobster sauce (broth-based)
27150410	Shrimp teriyaki (shrimp with soy-based sauce) (mixture)
27213100	Beef and rice with tomato-based sauce (mixture)
27213120	Porcupine balls with tomato-based sauce (mixture)
27213150	Chili con carne with beans and rice
27213300	Beef and rice with cream sauce (mixture)
27213400	Beef and rice with (mushroom) soup (mixture)
27213420	Porcupine balls with (mushroom) soup (mixture)
27213500	Beef and rice with soy-based sauce (mixture)
27220030	Ham and rice with (mushroom) soup (mixture)
27220150	Sausage and rice with (mushroom) soup (mixture)
27220170	Sausage and rice with cheese sauce (mixture)
27243300	Chicken or turkey and rice with cream sauce (mixture)
27243400	Chicken or turkey and rice with (mushroom) soup (mixture)
27243500	Chicken or turkey and rice with tomato-based sauce (mixture)
27243600	Chicken or turkey and rice with soy-based sauce (mixture)
27250710	Tuna and rice with (mushroom) soup (mixture)
27250810	Fish and rice with tomato-based sauce
27250820	Fish and rice with cream sauce
27250830	Fish and rice with (mushroom) soup
27315010	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce (mixture)
27315020	Beef, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce (mixture)
27315210	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27315220	Beef, rice, and vegetables (excluding carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27315250	Stuffed cabbage rolls with beef and rice
27315270	Stuffed grape leaves with beef and rice
27315310	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), (mushroom) soup (mixture)

27315320	Beef, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), (mushroom) soup (mixture)
27315410	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), gravy (mixture)
27315420	Beef, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), gravy (mixture)
27315510	Beef, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), soy-based sauce (mixture)
27315520	Beef, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), soy-based sauce (mixture)
27320320	Pork, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), soy-based sauce (mixture)
27320330	Pork, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), soy-based sauce (mixture)
27320340	Pork, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27320350	Pork, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), tomato-based sauce (mixture)
27320500	Sweet and sour pork with rice
27330050	Lamb or mutton, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), gravy (mixture)
27330060	Lamb or mutton, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27330080	Lamb or mutton, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), gravy
27330170	Stuffed grape leaves with lamb and rice
27345010	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), no sauce (mixture)
27345020	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), no sauce (mixture)
27345210	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), gravy (mixture)
27345220	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), gravy (mixture)
27345310	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), soy-based sauce (mixture)
27345320	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), soy-based sauce (mixture)
27345410	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), (mushroom) soup (mixture)
27345420	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), (mushroom) soup (mixture)
27345440	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), cheese sauce (mixture)
27345450	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), cheese sauce (mixture)
27345510	Chicken or turkey, rice, and vegetables (including carrots, broccoli, and/or dark-green leafy), tomato-based sauce (mixture)
27345520	Chicken or turkey, rice, and vegetables (excluding carrots, broccoli, and dark-green leafy), tomato-based sauce (mixture)
27350020	Paella with seafood
27350040	Shad creole, with rice
27350060	Shrimp creole, with rice
27360090	Paella, NFS

27363000	Gumbo with rice (New Orleans type with shellfish, pork, and/or poultry, tomatoes, okra, rice)
27363100	Jambalaya with meat and rice
27415120	Beef, tofu, and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-based sauce (mixture)
27415220	Beef, tofu, and vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)), soy-based sauce (mixture)
27420100	Pork, tofu, and vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)), soy-base sauce (mixture)
27420150	Kung Pao pork
27420370	Pork, tofu, and vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)), soy-based sauce (mixture)
27445220	Kung pao chicken
41210120	Stewed white beans, Puerto Rican style
58100155	Burrito with beef, rice, and cheese
58100160	Burrito with beef, beans, rice, and cheese
58100250	Burrito with chicken, rice, and cheese
58100255	Burrito with chicken, beans, rice, and cheese
58100300	Burrito with beans and rice, meatless
58100330	Burrito with rice, beans, cheese, sour cream, lettuce, tomato and guacamole, meatless
58101200	Flauta, NFS
58101230	Flauta with beef
58101240	Flauta with chicken
58101800	Ground beef with tomato sauce and taco seasonings on a cornbread crust
58104600	Chimichanga with beef and rice
58151100	Sushi, NFS
58151120	Sushi, with vegetables, no seafood (no fish or shellfish)
58151130	Sushi, with vegetables and seafood
58151150	Sushi, with seafood, no vegetables
58151160	Sushi, with egg, no vegetables, no seafood (no fish or shellfish), rolled in seaweed
58155110	Rice with chicken, Puerto Rican style (Arroz con Pollo)
58155210	Stuffed rice with chicken, Dominican style (Arroz relleno Dominicano)
58155310	Paella, Valenciana style, with meat (Paella Valenciana)
58155320	Seafood paella, Puerto Rican style
58155410	Soupy rice with chicken, Puerto Rican style (Asopao de pollo)
58155510	Soupy rice mixture with chicken and potatoes, Puerto Rican style
58155610	Rice meal fritter, Puerto Rican style (Almojabana)
58155810	Stewed rice, Puerto Rican style (arroz guisado)
58155910	Rice with squid, Puerto Rican style (arroz con calamares)
58156110	Fried rice, Puerto Rican style (arroz frito)
58156210	Rice with vienna sausage, Puerto Rican style (arroz con salchichas)
58156310	Rice with Spanish sausage, Puerto Rican style
58156410	Rice with onions, Puerto Rican style (arroz con cebollas)
58156510	Soupy rice from Puerto Rican style Asopao de Pollo (chicken parts reported separately)
58157110	Spicy rice pudding, Puerto Rican style
58157210	Rice pudding made with coconut milk, Puerto Rican style
58160120	Rice with beans and tomatoes
58160130	Rice with beans and chicken
58160135	Rice with beans and beef
58160140	Rice with beans and pork
58160150	Red beans and rice
58161110	Rice casserole with cheese
58161200	Rice, cooked with coconut milk (Arroz con coco)
58161510	Grape leaves stuffed with rice

58162090	Stuffed pepper, with meat
58162110	Stuffed pepper, with rice and meat
58162120	Stuffed pepper, with rice, meatless
58162130	Stuffed tomato, with rice and meat
58162140	Stuffed tomato, with rice, meatless
58162310	Rice pilaf
58163130	Dirty rice
58163310	Flavored rice mixture
58163330	Flavored rice mixture with cheese
58163360	Flavored rice, brown and wild
58163380	Flavored rice and pasta mixture
58163400	Flavored rice and pasta mixture, reduced sodium
58163410	Spanish rice
58163450	Spanish rice with ground beef
58163510	Rice dressing
58163610	Rice-vegetable medley
58164210	Rice dessert or salad with fruit
58175110	Tabbouleh (bulgar with tomatoes and parsley)
58200100	Wrap sandwich, filled with meat, poultry, or fish, vegetables, and rice
58200200	Wrap sandwich, filled with vegetables and rice
58200300	Wrap sandwich, filled with meat, poultry, or fish, vegetables, rice, and cheese
72202020	Broccoli casserole (broccoli, rice, cheese, and mushroom sauce)
75414020	Mushrooms, stuffed
75418030	Squash, summer, casserole, with rice and tomato sauce
75439500	Chop suey, meatless
75440170	Vegetable sticks, breaded (including corn, carrots, and green beans)
77316510	Stuffed cabbage, with meat and rice, Syrian dish, Puerto Rican style (Repollo relleno con carne y con arroz; Arabe Mihsy Melful)

Granola, Meal Replacement, and Breakfast Bars

[Magnesium L-Threonate] = 0.12%

53540000	Breakfast bar, NFS
53540200	Breakfast bar, cereal crust with fruit filling, lowfat
53540300	Fiber One Chewy Bar
53540400	Kellogg's Nutri-Grain Cereal Bar
53540402	Kellogg's Nutri-Grain Yogurt Bar
53540404	Kellogg's Nutri-Grain Fruit and Nut Bar
53540500	Breakfast bar, date, with yogurt coating
53540600	Milk 'n Cereal bar
53540700	Kellogg's Special K bar
53540800	Kashi GOLEAN Chewy Bars
53540802	Kashi TLC Chewy Granola Bar
53540804	Kashi GOLEAN Crunchy Bars
53540806	Kashi TLC Crunchy Granola Bar
53540900	Nature Valley Chewy Trail Mix Granola Bar
53540902	Nature Valley Chewy Granola Bar with Yogurt Coating
53540904	Nature Valley Sweet and Salty Nut Granola Bar
53540906	Nature Valley Crunchy Granola Bar
53541000	Quaker Chewy Granola Bar
53541002	Quaker Chewy 90 Calorie Granola Bar
53541004	Quaker Chewy 25% Less Sugar Granola Bar
53541006	Quaker Chewy Dipps Granola Bar
53541200	Meal replacement bar

53541300	Slim Fast Original Meal Bar
53542000	Snack bar, oatmeal
53542100	Granola bar, NFS
53542200	Granola bar, lowfat, NFS
53542210	Granola bar, nonfat
53543000	Granola bar, reduced sugar, NFS
53543100	Granola bar, peanuts, oats, sugar, wheat germ
53544200	Granola bar, chocolate-coated, NFS
53544210	Granola bar, with coconut, chocolate-coated
53544220	Granola bar with nuts, chocolate-coated
53544230	Granola bar, oats, nuts, coated with non-chocolate coating
53544250	Granola bar, coated with non-chocolate coating
53544300	Granola bar, high fiber, coated with non-chocolate yogurt coating
53544400	Granola bar, with rice cereal
53544410	Quaker Granola Bites
53544450	PowerBar (fortified high energy bar)

Pastas and Noodles

[Magnesium L-Threonate] = 0.12%

56101000	Macaroni, cooked, NS as to fat added in cooking
56101010	Macaroni, cooked, fat not added in cooking
56101030	Macaroni, cooked, fat added in cooking
56102000	Macaroni, whole wheat, cooked, NS as to fat added in cooking
56102010	Macaroni, whole wheat, cooked, fat not added in cooking
56102020	Macaroni, whole wheat, cooked, fat added in cooking
56103000	Macaroni, cooked, spinach, NS as to fat added in cooking
56103010	Macaroni, cooked, spinach, fat not added in cooking
56103020	Macaroni, cooked, spinach, fat added in cooking
56104000	Macaroni, cooked, vegetable, NS as to fat added in cooking
56104010	Macaroni, cooked, vegetable, fat not added in cooking
56104020	Macaroni, cooked, vegetable, fat added in cooking
56112000	Noodles, cooked, NS as to fat added in cooking
56112010	Noodles, cooked, fat not added in cooking
56112030	Noodles, cooked, fat added in cooking
56113000	Noodles, cooked, whole wheat, NS as to fat added in cooking
56113010	Noodles, cooked, whole wheat, fat not added in cooking
56113990	Noodles, cooked, spinach, NS as to fat added in cooking
56114000	Noodles, cooked, spinach, fat not added in cooking
56114020	Noodles, cooked, spinach, fat added in cooking
56116000	Noodles, chow mein
56116990	Long rice noodles (made from mung beans) cooked, NS as to fat added in cooking
56117000	Long rice noodles (made from mung beans), cooked, fat not added in cooking
56117010	Long rice noodles (made from mung beans), cooked, fat added in cooking
56117090	Chow fun rice noodles, cooked, NS as to fat added in cooking
56117100	Chow fun rice noodles, cooked, fat not added in cooking
56117110	Chow fun rice noodles, cooked, fat added in cooking
56130000	Spaghetti, cooked, NS as to fat added in cooking
56130010	Spaghetti, cooked, fat not added in cooking
56131000	Spaghetti, cooked, fat added in cooking
56132000	Spaghetti, cooked, high protein type (assume no fat added)
56132990	Spaghetti, cooked, whole wheat, NS as to fat added in cooking
56133000	Spaghetti, cooked, whole wheat, fat not added in cooking
56133010	Spaghetti, cooked, whole wheat, fat added in cooking

58122210	Gnocchi, cheese
58122220	Gnocchi, potato
58131100	Ravioli, NS as to filling, no sauce
58131310	Ravioli, meat-filled, no sauce
58131510	Ravioli, cheese-filled, no sauce
58131590	Ravioli, cheese and spinach-filled, no sauce
58133110	Manicotti, cheese-filled, no sauce
58134110	Stuffed shells, cheese-filled, no sauce
58134160	Stuffed shells, cheese- and spinach- filled, no sauce
58134650	Tortellini, meat-filled, no sauce
58134680	Tortellini, cheese-filled, no sauce
58134720	Tortellini, spinach-filled, no sauce
58134810	Cannelloni, cheese- and spinach-filled, no sauce
58301020	Lasagna with cheese and sauce (diet frozen meal)
58301030	Veal lasagna (diet frozen meal)
58301050	Lasagna with cheese and meat sauce (diet frozen meal)
58301080	Lasagna with cheese and meat sauce, reduced fat and sodium (diet frozen meal)
58301110	Vegetable lasagna (frozen meal)
58301150	Zucchini lasagna (diet frozen meal)
58302000	Macaroni and cheese (diet frozen meal)
58302030	Macaroni with veal, cheese, and sauce (diet frozen meal)
58302050	Beef and noodles with meat sauce and cheese (diet frozen meal)
58302060	Spaghetti or noodles with beef in tomato-based sauce, lowfat, reduced sodium (diet frozen meal)
58302080	Noodles with vegetables in tomato-based sauce (diet frozen meal)
58304010	Spaghetti and meatballs dinner, NFS (frozen meal)
58304020	Spaghetti and meatballs with tomato sauce, sliced apples, bread (frozen meal)
58304050	Spaghetti with meat and mushroom sauce (diet frozen meal)
58304060	Spaghetti with meat sauce (diet frozen meal)
58304200	Ravioli, cheese-filled, with tomato sauce (diet frozen meal)
58304220	Rigatoni with meat sauce and cheese (diet frozen meal)
58304230	Ravioli, cheese-filled, with vegetable and fruit (frozen meal)
58304250	Manicotti, cheese-filled, with tomato sauce (diet frozen meal)
58304300	Cannelloni, cheese-filled, with tomato sauce (diet frozen meal)
58304400	Linguini with vegetables and seafood in white wine sauce (diet frozen meal)
58305010	Mosticcoli with meatballs, sauce, bread (frozen meal)
58305250	Pasta with vegetable and cheese sauce (diet frozen meal)
58307010	Beef and pork cannelloni (diet frozen meal)

Mixed Foods containing Pastas and Noodles

Adjusted for pasta and noodle content of 40 to 70%

[Magnesium L-Threonate] = 0.048 to 0.084%

58130011	Lasagna with meat
58130013	Lasagna with meat, canned
58130020	Lasagna with meat and spinach
58130140	Lasagna with chicken or turkey
58130150	Lasagna, with chicken or turkey, and spinach
58130310	Lasagna, meatless
58130320	Lasagna, meatless, with vegetables
58130610	Lasagna with meat, whole wheat noodles
58130810	Lasagna, meatless, whole wheat noodles
58130910	Lasagna with meat, spinach noodles
58130950	Lasagna, meatless, spinach noodles

58131110	Ravioli, NS as to filling, with tomato sauce
58131120	Ravioli, NS as to filling, with cream sauce
58131320	Ravioli, meat-filled, with tomato sauce or meat sauce
58131323	Ravioli, meat-filled, with tomato sauce or meat sauce, canned
58131330	Ravioli, meat-filled, with cream sauce
58131520	Ravioli, cheese-filled, with tomato sauce
58131523	Ravioli, cheese-filled, with tomato sauce, canned
58131530	Ravioli, cheese-filled, with meat sauce
58131535	Ravioli, cheese-filled, with cream sauce
58131600	Ravioli, cheese and spinach-filled, with cream sauce
58131610	Ravioli, cheese and spinach filled, with tomato sauce
58132110	Spaghetti with tomato sauce, meatless
58132113	Pasta with tomato sauce and cheese, canned
58132350	Spaghetti with tomato sauce, meatless, whole wheat noodles
58132800	Spaghetti with clam sauce, NS as to red or white
58132810	Spaghetti with red clam sauce
58132820	Spaghetti with white clam sauce
58133120	Manicotti, cheese-filled, with tomato sauce, meatless
58133140	Manicotti, vegetable- and cheese-filled, with tomato sauce, meatless
58134120	Stuffed shells, cheese-filled, with tomato sauce, meatless
58134130	Stuffed shells, cheese-filled, with meat sauce
58134210	Stuffed shells, with chicken, with tomato sauce
58134310	Stuffed shells, with fish and/or shellfish, with tomato sauce
58134610	Tortellini, meat-filled, with tomato sauce
58134613	Tortellini, meat-filled, with tomato sauce, canned
58134620	Tortellini, cheese-filled, meatless, with tomato sauce
58134623	Tortellini, cheese-filled, meatless, with tomato sauce, canned
58134630	Tortellini, cheese-filled, meatless, with vegetables and vinaigrette dressing
58134640	Tortellini, cheese-filled, meatless, with vinaigrette dressing
58134660	Tortellini, cheese-filled, with cream sauce
58134710	Tortellini, spinach-filled, with tomato sauce
58135120	Chow fun noodles with vegetables, meatless
58136110	Lo mein, NFS
58136120	Lo mein, meatless
58137210	Pad Thai, NFS
58137220	Pad Thai, meatless
58145113	Macaroni or noodles with cheese, canned
58145114	Macaroni or noodles with cheese, made from dry mix
58145115	Macaroni or noodles with cheese, from boxed mix with already prepared cheese sauce
58146100	Pasta with tomato sauce, meatless
58146110	Pasta with meat sauce
58146120	Pasta with cheese and meat sauce
58146130	Pasta with carbonara sauce
58146150	Pasta with cheese and tomato sauce, meatless
58146160	Pasta with vegetables, no sauce or dressing
58146200	Pasta, meat-filled, with gravy, canned
58146300	Pasta, whole wheat, with meat sauce
58146310	Pasta, whole wheat, with tomato sauce, meatless
58147100	Pasta with pesto sauce
58147310	Macaroni, creamed
58147330	Macaroni, creamed, with cheese
58148600	Pasta tetrizzini, dry mix, prepared with water
58149110	Noodle pudding
58149160	Noodle pudding, with milk

Mixed Foods containing Pastas and Noodles

Adjusted for pasta and noodle content of up to 35%

[Magnesium L-Threonate] = up to 0.042%

58132310	Spaghetti with tomato sauce and meatballs or spaghetti with meat sauce or spaghetti with meat sauce and meatballs
58132313	Pasta with tomato sauce and meat or meatballs, canned
58132340	Spaghetti with tomato sauce and vegetables
58132360	Spaghetti with tomato sauce and meatballs, whole wheat noodles or spaghetti with meat sauce, whole wheat noodles or spaghetti
58132450	Spaghetti with tomato sauce, meatless, made with spinach noodles
58132460	Spaghetti with tomato sauce and meatballs made with spinach noodles, or spaghetti with meat sauce made with spinach noodles
58132710	Spaghetti with tomato sauce and frankfurters or hot dogs
58132713	Pasta with tomato sauce and frankfurters or hot dogs, canned
58132910	Spaghetti with tomato sauce and poultry
58133130	Manicotti, cheese-filled, with meat sauce
58135110	Chow fun noodles with meat and vegetables
58136130	Lo mein, with shrimp
58136140	Lo mein, with pork
58136150	Lo mein, with beef
58136160	Lo mein, with chicken
58137230	Pad Thai with chicken
58137240	Pad Thai with seafood
58137250	Pad Thai with meat
58140110	Spaghetti with corned beef, Puerto Rican style
58140310	Macaroni with tuna, Puerto Rican style (Macarrones con atun)
58145110	Macaroni or noodles with cheese
58145120	Macaroni or noodles with cheese and tuna
58145130	Macaroni or noodles with cheese and beef
58145140	Macaroni or noodles with cheese and tomato
58145150	Macaroni or noodles with cheese and pork or ham
58145160	Macaroni or noodles with cheese and frankfurters or hot dogs
58145170	Macaroni and cheese with egg
58145190	Macaroni or noodles with cheese and chicken or turkey
58147110	Macaroni or noodles with beans or lentils and tomato sauce
58147340	Macaroni, creamed, with cheese and tuna
58147350	Macaroni, creamed, with vegetables
58147510	Flavored pasta
58147520	Yat Ga Mein with meat, fish, or poultry
58148110	Macaroni or pasta salad
58148120	Macaroni or pasta salad with egg
58148130	Macaroni or pasta salad with tuna
58148140	Macaroni or pasta salad with crab meat
58148150	Macaroni or pasta salad with shrimp
58148160	Macaroni or pasta salad with tuna and egg
58148170	Macaroni or pasta salad with chicken
58148180	Macaroni or pasta salad with cheese
58148550	Macaroni or pasta salad with meat
58149210	Somen salad with noodles, lettuce, egg, fish, and pork

Hard Candy

Hard Candy

[Magnesium L-Threonate] = 0.12%

91701020	Almonds, sugar-coated
91701030	Almonds, yogurt-covered
91718000	Honey-combed hard candy with peanut butter
91718050	Honey-combed hard candy with peanut butter, chocolate covered
91728500	Sugared pecans (sugar and egg white coating)
91731100	Peanuts, sugar-coated
91731150	Peanuts, yogurt covered
91733000	Peanut brittle
91735000	Pralines
91742010	Sesame Crunch (Sahadi)
91745020	Hard candy
91745040	Butterscotch hard candy
91770020	Dietetic or low calorie hard candy
91770050	Dietetic or low calorie mints

Processed Fruits and Fruit Juices

Fruit Juice

[Magnesium L-Threonate] = 0.0885%

61201010	Grapefruit juice, freshly squeezed
61201020	Grapefruit juice, NS as to form
61201220	Grapefruit juice, canned, bottled or in a carton
61201620	Grapefruit juice, frozen (reconstituted with water)
61204000	Lemon juice, NS as to form
61204010	Lemon juice, freshly squeezed
61204200	Lemon juice, canned or bottled
61204600	Lemon juice, frozen
61207000	Lime juice, NS as to form
61207010	Lime juice, freshly squeezed
61207200	Lime juice, canned or bottled
61207600	Lime juice, frozen
61210000	Orange juice, NFS
61210010	Orange juice, freshly squeezed
61210220	Orange juice, canned, bottled or in a carton
61210250	Orange juice, with calcium added, canned, bottled or in a carton
61210620	Orange juice, frozen (reconstituted with water)
61210720	Orange juice, frozen, not reconstituted
61210820	Orange juice, frozen, with calcium added (reconstituted with water)
61213000	Tangerine juice, NFS
61213220	Tangerine juice, canned
61213620	Tangerine juice, frozen (reconstituted with water)
61213800	Fruit juice blend, including citrus, 100% juice
61213900	Fruit juice blend, including citrus, 100% juice, with calcium added
64100100	Fruit juice, NFS
64100110	Fruit juice blend, 100% juice
64100200	Fruit juice blend, with cranberry, 100% juice
64101010	Apple cider
64104010	Apple juice

64104600	Blackberry juice
64105400	Cranberry juice, 100%, not a blend
64116020	Grape juice
64120010	Papaya juice
64121000	Passion fruit juice
64124020	Pineapple juice
64126000	Pomegranate juice
64132010	Prune juice
64132500	Strawberry juice
64133100	Watermelon juice
64134000	Fruit smoothie drink, made with fruit or fruit juice only (no dairy products)
64200100	Fruit nectar, NFS
64201010	Apricot nectar
64201500	Banana nectar
64202010	Cantaloupe nectar
64203020	Guava nectar
64204010	Mango nectar
64205010	Peach nectar
64210010	Papaya nectar
64213010	Passion fruit nectar
64215010	Pear nectar
64221010	Soursop (Guanabana) nectar

Processed Fruits

[Magnesium L-Threonate] = 0.12%

61101200	Grapefruit, canned or frozen, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
61101220	Grapefruit, canned or frozen, unsweetened, water pack
61101230	Grapefruit, canned or frozen, in light syrup
61104200	Grapefruit and orange sections, cooked, canned, or frozen, NS as to added sweetener
61104220	Grapefruit and orange sections, cooked, canned, or frozen, unsweetened, water pack
61104230	Grapefruit and orange sections, cooked, canned, or frozen, in light syrup
61110230	Kumquat, cooked or canned, in syrup
61113500	Lemon pie filling
61119020	Orange, sections, canned, juice pack
61122300	Orange, mandarin, canned or frozen, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
61122320	Orange, mandarin, canned or frozen, juice pack
61122330	Orange, mandarin, canned or frozen, in light syrup
61122350	Orange, mandarin, canned or frozen, drained
62101000	Fruit, dried, NFS (assume uncooked)
62101050	Fruit mixture, dried (mixture includes three or more of the following: apples, apricots, dates, papaya, peaches, pears, pineappl
62101100	Apple, dried, uncooked
62101150	Apple, dried, uncooked, low sodium
62101200	Apple, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62101220	Apple, dried, cooked, unsweetened
62101230	Apple, dried, cooked, with sugar
62101300	Apple chips
62104100	Apricot, dried, uncooked
62104200	Apricot, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener

62104220	Apricot, dried, cooked, unsweetened
62104230	Apricot, dried, cooked, with sugar
62107100	Banana flakes, dehydrated
62107200	Banana chips
62108100	Currants, dried
62109100	Cranberries, dried
62110100	Date
62113100	Fig, dried, uncooked
62113200	Fig, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62113220	Fig, dried, cooked, unsweetened
62113230	Fig, dried, cooked, with sugar
62114000	Lychee, dried (lychee nuts)
62114050	Mango, dried
62114110	Papaya, dried
62116100	Peach, dried, uncooked
62116200	Peach, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62116220	Peach, dried, cooked, unsweetened
62116230	Peach, dried, cooked, with sugar
62119100	Pear, dried, uncooked
62119200	Pear, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62119220	Pear, dried, cooked, unsweetened
62119230	Pear, dried, cooked, with sugar
62120100	Pineapple, dried
62121100	Plum, rock salt, dried
62122100	Prune, dried, uncooked
62122200	Prune, dried, cooked, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
62122220	Prune, dried, cooked, unsweetened
62122230	Prune, dried, cooked, with sugar
62125100	Raisins
62125110	Raisins, cooked
62126000	Tamarind pulp, dried, sweetened ("Pulpitas")
63101210	Apple, cooked or canned, with syrup
63103110	Apricot, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63103120	Apricot, cooked or canned, unsweetened, water pack
63103130	Apricot, cooked or canned, in heavy syrup
63103140	Apricot, cooked or canned, in light syrup
63103150	Apricot, cooked or canned, drained solids
63103170	Apricot, cooked or canned, juice pack
63109610	Cantaloupe, frozen (balls)
63113030	Cherry pie filling
63113050	Cherry pie filling, low calorie
63115110	Cherries, sweet, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63115120	Cherries, sweet, cooked, unsweetened, water pack
63115130	Cherries, sweet, cooked or canned, in heavy syrup
63115140	Cherries, sweet, cooked or canned, in light syrup
63115150	Cherries, sweet, cooked or canned, drained solids
63115170	Cherries, sweet, cooked or canned, juice pack
63115200	Cherries, frozen

63119110	Fig, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63119120	Fig, cooked or canned, unsweetened, water pack
63119130	Fig, cooked or canned, in heavy syrup
63119140	Figs, cooked or canned, in light syrup
63123110	Grapes, seedless, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63123120	Grapes, seedless, cooked or canned, unsweetened, water pack
63123130	Grapes, seedless, cooked or canned, in heavy syrup
63125100	Guava shell (assume canned in heavy syrup)
63126600	Lychee, cooked or canned, in sugar or syrup
63127610	Honeydew, frozen (balls)
63133100	Papaya, cooked or canned, in sugar or syrup
63135110	Peach, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63135120	Peach, cooked or canned, unsweetened, water pack
63135130	Peach, cooked or canned, in heavy syrup
63135140	Peach, cooked or canned, in light or medium syrup
63135150	Peach, cooked or canned, drained solids
63135170	Peach, cooked or canned, juice pack
63135610	Peach, frozen, NS as to added sweetener
63135620	Peach, frozen, unsweetened
63135630	Peach, frozen, with sugar
63137110	Pear, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63137120	Pear, cooked or canned, unsweetened, water pack
63137130	Pear, cooked or canned, in heavy syrup
63137140	Pear, cooked or canned, in light syrup
63137150	Pear, cooked or canned, drained solids
63137170	Pear, cooked or canned, juice pack
63141110	Pineapple, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63141120	Pineapple, cooked or canned, unsweetened, water pack
63141130	Pineapple, cooked or canned, in heavy syrup
63141140	Pineapple, cooked or canned, in light syrup
63141150	Pineapple, cooked or canned, drained solids
63141170	Pineapple, cooked or canned, juice pack
63143110	Plum, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63143120	Plum, cooked or canned, unsweetened, water pack
63143130	Plum, cooked or canned, in heavy syrup
63143140	Plum, cooked or canned, in light syrup
63143150	Plum, cooked or canned, drained solids
63143170	Plum, cooked or canned, juice pack
63147110	Rhubarb, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63147120	Rhubarb, cooked or canned, unsweetened
63147130	Rhubarb, cooked or canned, in heavy syrup
63147140	Rhubarb, cooked or canned, in light syrup
63147150	Rhubarb, cooked or canned, drained solids
63147600	Rhubarb, frozen, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63147620	Rhubarb, frozen, with sugar
63200200	Berries, frozen, NFS

63201110	Blackberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63201130	Blackberries, cooked or canned, in heavy syrup
63201600	Blackberries, frozen
63201800	Blackberries, frozen, sweetened, NS as to type of sweetener
63203110	Blueberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63203120	Blueberries, cooked or canned, unsweetened, water pack
63203125	Blueberries, cooked or canned, in light syrup
63203130	Blueberries, cooked or canned, in heavy syrup
63203550	Blueberries, frozen, sweetened
63203570	Blueberries, frozen, NS as to sweetened or unsweetened
63203600	Blueberries, frozen, unsweetened
63203700	Blueberry pie filling
63205600	Boysenberries, frozen
63207000	Cranberries, NS as to raw, cooked, or canned
63207110	Cranberries, cooked or canned
63215600	Loganberries, frozen
63219110	Raspberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63219120	Raspberries, cooked or canned, unsweetened, water pack
63219130	Raspberries, cooked or canned, in heavy syrup
63219600	Raspberries, frozen, NS as to added sweetener
63219610	Raspberries, frozen, unsweetened
63219620	Raspberries, frozen, with sugar
63223110	Strawberries, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63223120	Strawberries, cooked or canned, unsweetened, water pack
63223130	Strawberries, cooked or canned, in syrup
63223600	Strawberries, frozen, NS as to added sweetener
63223610	Strawberries, frozen, unsweetened
63223620	Strawberries, frozen, with sugar
63311080	Fruit cocktail or mix, frozen
63311110	Fruit cocktail, cooked or canned, NS as to sweetened or unsweetened; sweetened, NS as to type of sweetener
63311120	Fruit cocktail, cooked or canned, unsweetened, water pack
63311130	Fruit cocktail, cooked or canned, in heavy syrup
63311140	Fruit cocktail, cooked or canned, in light syrup
63311145	Tropical fruit cocktail, cooked or canned, in light syrup
63311150	Fruit cocktail, cooked or canned, drained solids
63311170	Fruit cocktail, cooked or canned, juice pack
63420100	Fruit juice bar, frozen, orange flavor
63420110	Fruit juice bar, frozen, flavor other than orange
63420200	Fruit juice bar, frozen, sweetened with low calorie sweetener, flavors other than orange
63430100	Sorbet, fruit, noncitrus flavor
63430110	Sorbet, fruit, citrus flavor
63430500	Fruit juice bar with cream, frozen

Processed Vegetables and Vegetable Juices

Vegetable Juices

[Magnesium L-Threonate] = 0.0885%

74301100	Tomato juice
74301150	Tomato juice, low sodium
74302000	Tomato juice cocktail
74303000	Tomato and vegetable juice, mostly tomato
74303100	Tomato and vegetable juice, mostly tomato, low sodium
74304000	Tomato juice with clam or beef juice
78101000	Vegetable and fruit juice blend, 100% juice, with high vitamin C plus added vitamin E and vitamin A
92530950	Vegetable and fruit juice drink, with high vitamin C
92550400	Vegetable and fruit juice drink, low calorie, with high vitamin C
92550405	Vegetable and fruit juice drink, low calorie, with high vitamin C plus added vitamin E and vitamin A

Snack Foods

Salty Snacks

[Magnesium L-Threonate] = 0.12%

54401010	Salty snacks, corn or cornmeal base, nuts or nuggets, toasted
54401020	Salty snacks, corn or cornmeal base, corn chips, corn-cheese chips
54401050	Salty snacks, corn or cornmeal base, corn puffs and twists; corn-cheese puffs and twists
54401080	Salty snacks, corn or cornmeal base, tortilla chips
54401090	Salty snacks, corn or cornmeal base, corn chips, corn-cheese chips, unsalted
54401100	Salty snacks, corn or cornmeal base, tortilla chips, light (baked with less oil)
54401120	Salty snacks, corn or cornmeal base, tortilla chips, fat free, made with Olean
54401150	Salty snacks, corn or cornmeal base, tortilla chips, lowfat, baked without fat
54401170	Salty snacks, corn or cornmeal base, tortilla chips, lowfat, baked without fat, unsalted
54401200	Salty snacks, corn or cornmeal base, with oat bran, tortilla chips
54401210	Salty snacks, corn based puffs and twists, cheese puffs and twists, lowfat
54402080	Salty snacks, corn or cornmeal base, tortilla chips, unsalted
54402200	Salty snack mixture, mostly corn or cornmeal based, with pretzels, without nuts
54402300	Salty snacks, wheat-based, high fiber
54402500	Salty snacks, wheat- and corn-based chips
54402600	Salty snacks, multigrain, chips
54402700	Pita chips
54403000	Popcorn, popped in oil, unbuttered
54403010	Popcorn, air-popped (no butter or no oil added)
54403020	Popcorn, popped in oil, buttered
54403040	Popcorn, air-popped, buttered
54403050	Popcorn, flavored
54403060	Popcorn, popped in oil, lowfat, low sodium
54403070	Popcorn, popped in oil, lowfat
54403090	Popcorn, popped in oil, unsalted
54403110	Popcorn, sugar syrup or caramel-coated
54403120	Popcorn, sugar syrup or caramel-coated, with nuts
54403150	Popcorn, sugar syrup or caramel-coated, fat free
54406010	Snacks, onion-flavored rings
54406200	Shrimp chips (tapioca base)
54408000	Pretzels, NFS

54408010	Pretzels, hard
54408020	Pretzels, soft
54408030	Pretzel, hard, unsalted
54408040	Pretzels, soft, unsalted
54408050	Pretzel, oatbran, hard
54408070	Pretzel, hard, multigrain
54408200	Pretzel, hard, chocolate-coated
54408250	Pretzel, yogurt-covered
54408300	Pretzels, cheese-filled
54412110	Wheat sticks, 100% whole wheat
54420010	Multigrain mixture, pretzels, cereal and/or crackers, nuts
54420100	Oriental party mix, with peanuts, sesame sticks, chili rice crackers and fried green peas
54420200	Multigrain mixture, bread sticks, sesame nuggets, pretzels, rye chips
54430010	Yogurt chips
54440010	Bagel chip

Mixed Foods containing Salty Snacks

Adjusted for salty snack content of up to 15%

[Magnesium L-Threonate] = 0.018%

58101820	Mexican casserole made with ground beef, beans, tomato sauce, cheese, taco seasonings, and corn chips
58101830	Mexican casserole made with ground beef, tomato sauce, cheese, taco seasonings, and corn chips
58104080	Nachos with beef, beans, cheese, and sour cream
58104090	Nachos with cheese and sour cream
58104100	Nachos with cheese, meatless, no beans
58104110	Nachos with beans, no cheese
58104120	Nachos with beans and cheese
58104130	Nachos with beef, beans, and cheese
58104140	Nachos with beef and cheese
58104160	Nachos with chili
58104180	Nachos with beef, beans, cheese, tomatoes, sour cream and onions
58104250	Nachos with chicken or turkey and cheese with chicken or turkey and cheese

Soft Candy

Chocolate and Candy Bars

[Magnesium L-Threonate] = 0.12%

91700500	M&M's Almond Chocolate Candies
91701010	Almonds, chocolate covered
91703010	Caramel, chocolate-flavored roll
91703040	Caramel candy, chocolate covered
91703050	Caramel with nuts and cereal, chocolate covered
91703060	Caramel with nuts, chocolate covered
91703070	Rolo
91703150	Toblerone, milk chocolate with honey and almond nougat
91703200	TWIX Caramel Cookie Bars (formerly TWIX Cookie Bars)
91703250	TWIX Chocolate Fudge Cookie Bars
91703300	TWIX Peanut Butter Cookie Bars
91703400	Whatchamacallit
91703600	Espresso coffee beans, chocolate-covered
91705010	Milk chocolate candy, plain

91705020	Milk chocolate candy, with cereal
91705030	Kit Kat
91705040	Chocolate, milk, with nuts, not almond or peanuts
91705050	Milk chocolate candy, with fruit and nuts
91705060	Milk chocolate candy, with almonds
91705070	Chocolate, milk, with peanuts
91705090	Chocolate candy with fondant and caramel
91705200	Chocolate, semi-sweet morsel
91705300	Chocolate, sweet or dark
91705400	Chocolate, white
91705410	Chocolate, white, with almonds
91705420	Chocolate, white, with cereal
91705500	Mexican chocolate (tablet)
91706000	Coconut candy, chocolate covered
91707010	Fondant, chocolate covered
91709000	Gumdrops, chocolate covered
91713010	Fudge, chocolate, chocolate-coated
91713020	Fudge, chocolate, chocolate-coated, with nuts
91713030	Fudge, chocolate
91713040	Fudge, chocolate, with nuts
91715000	Fudge, caramel and nut, chocolate-coated candy
91715100	SNICKERS Bar
91715200	Baby Ruth
91715300	100 GRAND Bar
91716110	Halvah, chocolate covered
91718100	Butterfinger
91718200	Chocolate-flavored sprinkles
91723010	Marshmallow, chocolate covered
91726110	Nougat, with caramel, chocolate covered
91726130	MILKY WAY Bar
91726140	MILKY WAY MIDNIGHT Bar (formerly MILKY WAY DARK Bar)
91726150	MARS Almond Bar (formerly MARS bar)
91726410	Nougat, chocolate covered
91726420	3 MUSKETEERS Bar
91727010	Nuts, chocolate covered, not almonds or peanuts
91731000	Peanuts, chocolate covered
91731010	M&M's Peanut Chocolate Candies
91731060	M&M's Peanut Butter Chocolate Candies
91732100	Planters Peanut Bar
91733200	Peanut Bar, chocolate covered candy
91734000	Peanut butter, chocolate covered
91734100	Reese's Peanut Butter Cup
91734200	Reese's Pieces
91734300	Reese's Sticks
91734400	Reese's Fast Break
91734450	Reese's Crispy Crunchy Bar
91739010	Raisins, chocolate covered
91739510	Raisins, carob covered
91746010	Sugar-coated chocolate discs
91746100	M&M's Milk Chocolate Candies (formerly M&M's Plain Chocolate Candies)
91746120	Sixlets
91746150	Easter egg, candy coated chocolate
91760100	Toffee, chocolate covered
91760200	Toffee, chocolate-coated, with nuts

91760500	Truffles
91770030	Dietetic or low calorie candy, chocolate covered
91780010	Snickers Marathon Energy bar
91781010	Snickers Marathon Protein bar

Soft Candy

[Magnesium L-Threonate] = 0.12%

91700010	Candy, NFS
91702010	Butterscotch morsels
91703020	Caramel, flavor other than chocolate
91703030	Caramel, with nuts
91703080	Caramel, all flavors, sugar free
91703500	Nuts, carob-coated
91706100	Coconut candy, no chocolate covering
91706400	Coconut candy, Puerto Rican style
91707000	Fondant
91708000	Fruit peel, candied
91708010	Date candy
91708020	Soft fruit confections
91708030	Fruit leather and fruit snacks candy
91708040	Fun Fruits Creme Supremes
91708070	Tamarind candy
91708100	Fruit snacks candy, with high vitamin C
91708150	Yogurt covered fruit snacks candy, with added vitamin C
91708160	Yogurt covered fruit snacks candy rolls, with high vitamin C
91713050	Fudge, peanut butter
91713060	Fudge, peanut butter, with nuts
91713070	Fudge, vanilla
91713080	Fudge, vanilla, with nuts
91713090	Fudge, divinity
91713100	Fudge, brown sugar (penuche)
91716010	Halvah, plain
91718300	Ladoo, round ball, Asian-Indian dessert
91721000	Licorice
91723000	Marshmallow
91723020	Marshmallow, candy-coated
91723050	Marshmallow, coconut-coated
91726000	Nougat, plain
91728000	Nut roll, fudge or nougat, caramel and nuts
91732000	Peanut bar
91734500	Peanut butter morsels
91736000	Pineapple candy, Puerto Rican style
91739600	Raisins, yogurt covered
91745010	Gumdrops
91745100	Skittles
91750000	Taffy
91760000	Toffee, plain
91760700	Wax candy, liquid filled
91770000	Dietetic or low calorie candy, NFS
91770010	Dietetic or low calorie gumdrops

Soup and Soup Mixes

Non-Cream Soups

[Magnesium L-Threonate] = 0.0473%

14710200	Beer soup, made with milk
28310110	Beef, broth, bouillon, or consommé
28310120	Beef, broth, bouillon, or consommé, canned, low sodium
28310150	Oxtail soup
28310210	Chili beef soup
28310220	Chili beef soup, chunky style
28310230	Meatball soup, Mexican style (Sopa de Albondigas)
28310320	Beef noodle soup, Puerto Rican style (Sopa de carne y fideos)
28310330	Beef and rice noodle soup, Oriental style (Vietnamese Pho Bo)
28310420	Beef and rice soup, Puerto Rican style
28311010	Pepperpot (tripe) soup
28315100	Beef vegetable soup with potato, stew type
28315110	Beef noodle soup, chunky style
28315120	Beef vegetable soup with noodles, stew type, chunky style
28315130	Beef vegetable soup with rice, stew type, chunky style
28315140	Beef vegetable soup, Mexican style (Sopa / caldo de Res)
28315150	Meat and corn hominy soup, Mexican style (Pozole)
28315160	Italian Wedding Soup
28316020	Beef and mushroom soup, canned, low sodium
28317010	Beef stroganoff soup, chunky style
28320110	Pork and rice soup, stew type, chunky style
28320120	Pork vegetable soup with noodles, stew type, chunky style
28320130	Ham, rice, and potato soup, Puerto Rican style
28320140	Ham, noodle, and vegetable soup, Puerto Rican style
28320150	Pork, vegetable soup with potatoes, stew type
28320300	Pork with vegetable (excluding carrots, broccoli and/or dark-green leafy) soup, Oriental Style
28321130	Bacon soup, cream of, prepared with water
28330110	Scotch broth (lamb, vegetables, and barley)
28331110	Lamb, pasta, and vegetable soup, Puerto Rican style
28340110	Chicken, broth, bouillon, or consommé
28340150	Mexican style chicken broth soup stock
28340170	Chicken broth, canned, low sodium
28340210	Chicken rice soup, Puerto Rican style (Sopa de pollo con arroz)
28340220	Chicken soup with noodles and potatoes, Puerto Rican style
28340310	Chicken gumbo soup
28340510	Chicken noodle soup, chunky style
28340530	Chicken soup
28340550	Sweet and sour soup
28340580	Chicken soup with vegetables (broccoli, carrots, celery, potatoes and onions), Oriental style
28340610	Chicken or turkey vegetable soup, stew type
28340620	Turkey noodle soup, chunky style
28340630	Chicken vegetable soup with rice, stew type, chunky style
28340640	Chicken vegetable soup with noodles, stew type, chunky style
28340650	Chicken vegetable soup with rice, stew type, chunky style, prepared with milk
28340670	Chicken vegetable soup with rice, Mexican style (Sopa / Caldo de Pollo)
28340680	Chicken or turkey and corn hominy soup, Mexican style (Pozole)
28340690	Chicken vegetable soup with potato and cheese, chunky style

28340700	Bird's nest soup (chicken, ham, and noodles)
28340750	Hot and sour soup
28340800	Chicken soup with vegetables and fruit, Oriental Style
28345010	Chicken or turkey soup, cream of, canned, reduced sodium, NS as to made with milk or water
28345020	Chicken or turkey soup, cream of, canned, reduced sodium, made with milk
28345030	Chicken or turkey soup, cream of, canned, reduced sodium, made with water
28345110	Chicken or turkey soup, cream of, NS as to prepared with milk or water
28345120	Chicken or turkey soup, cream of, prepared with milk
28345130	Chicken or turkey soup, cream of, prepared with water
28345160	Chicken and mushroom soup, cream of, prepared with milk
28345170	Duck soup
28350050	Fish chowder
28350110	Crab soup, NS as to tomato-base or cream style
28350120	Crab soup, tomato-base
28350210	Clam chowder, NS as to Manhattan or New England style
28350220	Clam chowder, Manhattan
28350310	Turtle and vegetable soup
28351110	Fish and vegetable soup, no potatoes (Sopa de pescado)
28351120	Fish soup, with potatoes (Sopa de Pescado)
28351160	Codfish, rice, and vegetable soup, Puerto Rican style
28351170	Codfish soup with noodles, Puerto Rican style
28355110	Clam chowder, New England, NS as to prepared with water or milk
28355120	Clam chowder, New England, prepared with milk
28355130	Clam chowder, New England, prepared with water
28355140	Clam chowder, New England, canned, reduced sodium, ready-to-serve
28355210	Crab soup, cream of, prepared with milk
28355250	Lobster bisque
28355260	Lobster gumbo
28355310	Oyster stew
28355350	Salmon soup, cream style
28355410	Shrimp soup, cream of, NS as to prepared with milk or water
28355420	Shrimp soup, cream of, prepared with milk
28355430	Shrimp soup, cream of, prepared with water
28355440	Shrimp gumbo
28355450	Seafood soup with potatoes and vegetables (including carrots, broccoli, and/or dark-green leafy)
28355460	Seafood soup with potatoes and vegetables (excluding carrots, broccoli, and dark-green leafy)
28355470	Seafood soup with vegetables (including carrots, broccoli, and/or dark-green leafy (no potatoes)
28355480	Seafood soup with vegetables (excluding carrots, broccoli, and dark-green leafy (no potatoes)
28360100	Meat broth, Puerto Rican style
28360210	Spanish vegetable soup, Puerto Rican style (Caldo gallego)
32300100	Egg drop soup
32301100	Garlic egg soup, Puerto Rican style (Sopa de ajo)
41601010	Bean soup, NFS
41601020	Bean with bacon or pork soup
41601030	Black bean soup
41601040	Lima bean soup
41601050	Soybean soup, made with milk
41601060	Bean soup, with macaroni and meat
41601070	Soybean soup, miso broth

41601080	Pinto bean soup
41601090	Bean soup, with macaroni
41601100	Portuguese bean soup
41601110	Bean and ham soup, chunky style
41601120	Bean soup with vegetables, rice, and pork
41601130	Bean soup, mixed beans
41601160	Bean and ham soup, canned, reduced sodium, prepared with water or ready-to-serve
41601170	Bean and rice soup
41601200	Liquid from stewed kidney beans, Puerto Rican style
41602010	Pea and ham soup, chunky style, canned or ready-to-serve
41602020	Garbanzo or chickpea soup
41602030	Split pea and ham soup
41602050	Split pea soup
41602070	Split pea soup, canned, reduced sodium, prepared with water or ready-to-serve
41602090	Split pea and ham soup, canned, reduced sodium, prepared with water or ready-to-serve
41603010	Lentil soup
41610100	White bean soup, Puerto Rican style (Sopon de habichuelas blancas)
58400000	Soup, NFS
58400100	Noodle soup, NFS
58400200	Rice soup, NFS
58401200	Barley soup, sweet, with or without nuts, Oriental Style
58402010	Beef noodle soup
58402020	Beef dumpling soup
58402030	Beef rice soup
58403010	Chicken noodle soup
58403030	Chicken noodle soup, canned, low sodium, ready-to-serve
58403060	Chicken noodle soup, canned, reduced sodium, ready-to-serve
58403100	Noodle and potato soup, Puerto Rican style
58404010	Chicken or turkey rice soup, canned, or ready-to-serve
58404040	Chicken rice soup, canned, reduced sodium, prepared with water or ready-to-serve
58404050	Chicken rice soup, canned, reduced sodium, prepared with milk
58404100	Rice and potato soup, Puerto Rican style
58404500	Matzo ball soup
58404510	Chicken soup with dumplings and potatoes
58404520	Chicken soup with dumplings
58406010	Turkey noodle soup
58407000	Instant soup, NFS
58407010	Instant soup, noodle
58407030	Soup, mostly noodles
58407035	Soup, mostly noodles, reduced fat, reduced sodium
58407040	Instant soup, rice
58407050	Instant soup, noodle with egg, shrimp or chicken
58408010	Won ton (wonton) soup
58408500	Noodle soup with vegetables, Oriental style
58409000	Noodle soup, with fish ball, shrimp, and dark green leafy vegetable
58410100	Rice soup, made with tea
58421000	Sopa seca (dry soup), Mexican style, NFS
58421010	Sopa Seca de Fideo, Mexican style, made with dry noodles
58421020	Sopa de Fideo Aguada, Mexican style noodle soup
58421060	Sopa seca de arroz (dry rice soup), Mexican style
58421080	Sopa de tortilla, Mexican style tortilla soup
58450300	Noodle soup, made with milk
63415000	Soup, sour cherry
63415100	Soup, fruit

74601000	Tomato soup, NFS
74602010	Tomato soup, prepared with water
74602050	Tomato soup, instant type, prepared with water
74602100	Tomato soup, canned, low sodium, ready-to-serve
74602200	Tomato soup, canned, reduced sodium, prepared with water
74602300	Tomato soup, canned, reduced sodium, prepared with milk
74603010	Tomato beef soup, prepared with water
74604010	Tomato beef noodle soup, prepared with water
74604100	Tomato beef rice soup, prepared with water
74604500	Tomato noodle soup, prepared with water
74605010	Tomato rice soup, prepared with water
74606010	Tomato vegetable soup, prepared with water
74606020	Tomato vegetable soup with noodles, prepared with water
75601100	Beet soup (borscht)
75601200	Cabbage soup
75601210	Cabbage with meat soup
75604600	Gazpacho
75607000	Mushroom soup, NFS
75607040	Mushroom soup, with meat broth, prepared with water
75607130	Mushroom soup, made from dry mix
75608100	Onion soup, French
75608200	Onion soup, made from dry mix
75609000	Pea soup, NFS
75609010	Pea soup, prepared with milk
75609020	Pea soup, prepared with water
75609050	Pea soup, canned, low sodium, prepared with water
75646010	Shav soup
75647000	Seaweed soup
75649010	Vegetable soup, prepared with water or ready-to-serve
75649030	Vegetable soup, canned, low sodium, prepared with water or ready-to-serve
75649050	Vegetable soup, made from dry mix
75649070	Vegetable soup, made from dry mix, low sodium
75650990	Minestrone soup, canned, reduced sodium, ready-to-serve
75651010	Vegetable bean soup, prepared with water or ready-to-serve
75651020	Vegetable beef soup, prepared with water
75651030	Vegetable beef noodle soup, prepared with water
75651040	Vegetable noodle soup, prepared with water
75651050	Vegetable chicken or turkey soup, prepared with water or ready-to-serve
75651070	Vegetable rice soup, prepared with water
75651080	Vegetable beef soup with rice, prepared with water or ready-to-serve
75651090	Vegetable chicken soup, canned, low sodium, prepared with water
75651110	Vegetable chicken rice soup, canned, prepared with water or ready-to-serve
75651120	Vegetable chicken noodle soup, prepared with water or ready-to-serve
75651140	Vegetable soup with chicken broth, Mexican style (Sopa Ranchera)
75651150	Vegetable noodle soup, reduced sodium, canned, prepared with water or ready-to-serve
75652030	Vegetable beef soup, prepared with milk
75654010	Vegetarian vegetable soup, prepared with water
75656010	Vegetable soup, Spanish style, stew type
75656020	Vegetable soup, chunky style
75656040	Vegetable soup, with pasta, chunky style
75656060	Vegetable beef soup, chunky style
75657000	Vegetable broth, bouillon
77513010	Spanish stew, Puerto Rican style (Cocido Espanol)
77563010	Puerto Rican stew (Salcocho / Sancocho)

Non-Cream Soups, canned

Adjusted for not being reconstituted, by a factor of 2
[Magnesium L-Threonate] = 0.0946%

28340520	Chicken soup, canned, undiluted
28345040	Chicken or turkey soup, cream of, canned, reduced sodium, undiluted
28345140	Chicken or turkey soup, cream of, canned, undiluted
58402000	Beef noodle soup, canned, undiluted
58403020	Chicken noodle soup, canned, undiluted
58404020	Chicken and rice soup, canned, undiluted
74602030	Tomato soup, canned, undiluted
74605000	Tomato rice soup, canned, undiluted
75604610	Gazpacho, canned, undiluted
75607030	Mushroom soup, canned, undiluted
75649020	Vegetable soup, canned, undiluted
75651060	Vegetable chicken or turkey soup, canned, undiluted
75652020	Vegetable beef soup, canned, undiluted
75654020	Vegetarian vegetable soup, undiluted

Non-Cream Soups, Dry Powdered

Adjusted for not being reconstituted, by a factor of 31.25
[Magnesium L-Threonate] = 1.478%

28310130	Beef, broth, bouillon, or consommé, dry, not reconstituted
28310140	Beef, broth, bouillon, or consommé, low sodium, dry, not reconstituted
28340140	Chicken broth, bouillon, or consommé, dry, not reconstituted
75608300	Onion soup, dry mix, not reconstituted
75649060	Vegetable soup, dry mix, not reconstituted

SUBMISSION END

000300